

NOT TO CIRCULATE

NOT TO CIRCULATE



Digitized by the Internet Archive
in 2016

<https://archive.org/details/journaloftenness7511tenn>

STACKS

HEALTH SCIENCES LIBRARY
UNIVERSITY OF MARYLAND
BALTIMORE

Vol. 75, No. 1 • January, 1982

JAN 1 9'82

REC'D.

NOT TO CIRC

SHELF UNDER

Journal of the

TENNESSEE

MEDICAL ASSOCIATION



TENNESSEE MEDICAL ASSOCIATION

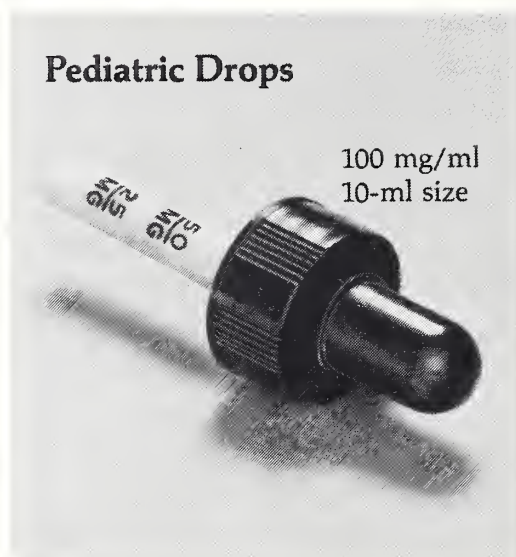
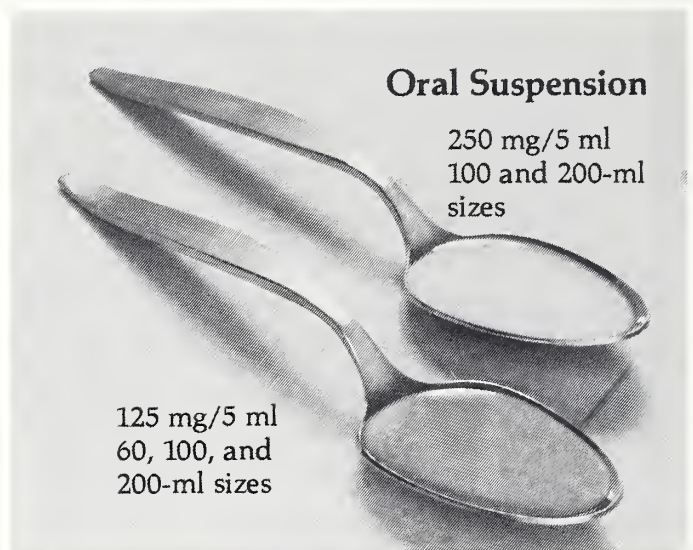
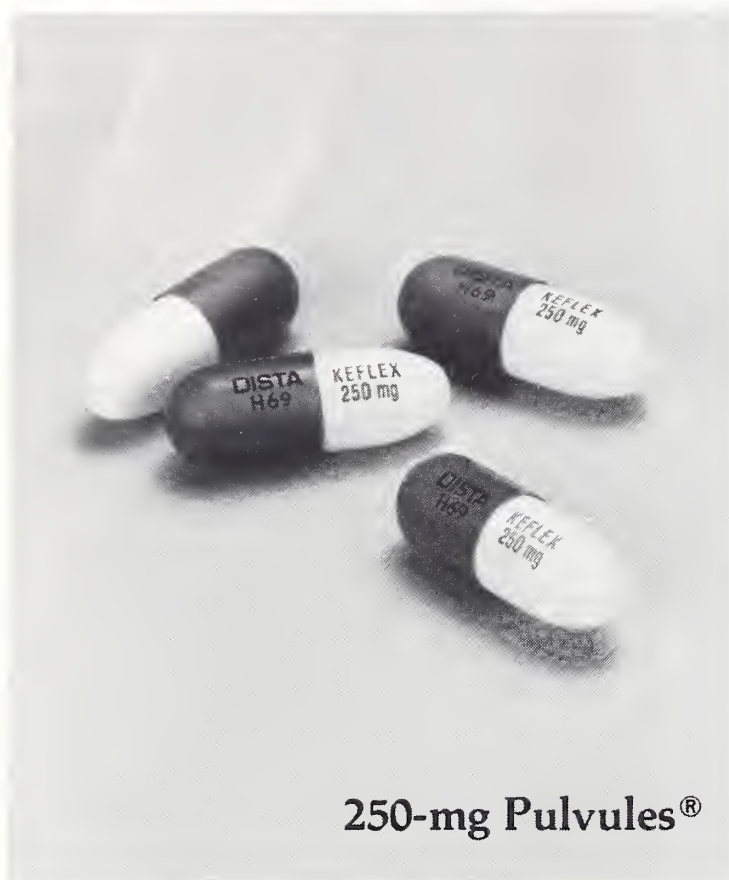
147th Annual Meeting

April 14-17, 1982

Hyatt Regency Hotel

Memphis, Tennessee

easy to take



Keflex®

cephalexin

Additional information available
to the profession on request.



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Journal of the Tennessee Medical Association

Vol. 75, No. 1
JANUARY, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

Jahn B. Thamison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

Allen S. Edmonsan, M.D.
P. O. Box 4899
Memphis, 38104

PRESIDENT-ELECT

George W. Holcomb, Jr., M.D.
218 20th Ave. North
Nashville, 37203

CHAIRMAN, BOARD OF TRUSTEES

James C. Brodshaw, Jr., M.D.
404 E. Spring St.
Lebanon, 37087

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkersan

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to
Journal of the Tennessee Medical
Association, 112 Louise Ave.,
Nashville, TN 37203.

contents

Original Contributions

- 11 Management of Varicose Veins By Surgery and By Injection—*Malcolm R. Lewis, M.D.*
- 13 A Whole Life Is Watching at the Tonsillectomy—*J. C. Gros, M.D.*
- 17 Case Report—Recurrent Inflammatory Skin Lesions Complicating Jejunioileal Bypass—*M. H. A. Qureshi, M.D.*
- 20 Case Report—Unusual Presentation of North American Blastomycosis—*William B. Harwell, M.D.*

Special Features

- 22 Special Item—Medical Ethics: "Zebras" vs. "Horses"—*Glenn C. Graber, Ph.D., John A. Eaddy, M.D.*
- 24 NIH Consensus Development Conference Summary—CEA as a Cancer Marker

AMA 1981 Annual Meeting Reports

- 26 AMA Statement on Voluntary Health Planning
- 29 Initiation of Voluntary, Locally Based Health Planning

Regular Features

- 39 Medical Grand Rounds—Myocardial Infarction of Nonatheromatous Origin
- 46 Diabetes Clinical Care Conference—Diabetic Ketoacidosis During Treatment With a Portable Insulin Pump
- 48 Radiology Case of the Month
- 50 Public Health Report—Tennessee Renal Disease Program
- 51 EKG of the Month

President's Page

- 57 Physician Responsibility

Editorials

- 58 New Year's Greetings
- 59 Elegy for a Mind

News

- 62 Announcements
- 63 Continuing Medical Education Opportunities
- 69 Medical Briefs

Departments

- 59 Our Mail Box
- 60 In Memoriam
- 60 New Members
- 60 Personal News
- 60 Physician's Recognition Award Recipients
- 71 Placement Service
- 72 Information for Authors
- 72 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

DRAMATIC NEW CLINICAL PROOF*

In the treatment of impetigo—

- **100% cure rate with Tegopen®** (cloxacillin sodium)
- **only a 60% cure rate with penicillin V-K**



As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. No treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular.

(12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Journal of the Tennessee Medical Association

Vol. 75, No. 2
FEBRUARY, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomson, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hodley Williams

MANAGING EDITOR

Jeon Wishnick

TMA OFFICERS

PRESIDENT

Allen S. Edmonson, M.D.
P. O. Box 4899
Memphis, 38104

PRESIDENT-ELECT

George W. Holcomb, Jr., M.D.
218 20th Ave. North
Nashville, 37203

CHAIRMAN, BOARD OF TRUSTEES

James C. Brodshow, Jr., M.D.
404 E. Spring St.
Lebanon, 37087

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hodley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wolloce

EXECUTIVE ASSISTANT

Ron E. Gont

STAFF ATTORNEY

Jock Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

contents

Original Contributions

- 91 Ectopic Pregnancy Revisited—I. Ray King, M.D.
- 93 The Asklepiion Club of Nashville—R. H. Kampmeier, M.D.
- 100 Endoscopic Retrograde Cholangiopancreatography (ERCP)—Clinical Applications—Alan C. Dopp, M.D.
- 103 Case Report—Adenocarcinoma of the Stomach Associated With Pregnancy—C. Kemp Skokos, M.D.; Jeffrey Lipshitz, M.B.Ch.B.

Special Features

- 122 Special Communication—In Defense of Cesarean Section—Marvin G. Gregory, M.D.
- 124 Special Communication—Political Hardball at the Aging Conference—Lewis B. Lefkowitz, Jr., M.D.

AMA 1981 Annual Meeting Reports

- 109 Examinations for Medical Licensure
- 113 Environmental Analysis

Regular Features

- 128 Diabetes Clinical Care Conference—Hyperkalemia in Diabetes Mellitus
- 130 EKG of the Month
- 132 CAT Scan of the Month
- 133 Public Health Report—Training for EMT/Paramedics in Perinatal Care and Transport—Jack P. Powell, M.D.

President's Page

- 141 Community Effort

Editorials

- 142 Win, Lose, or Draw
- 143 On Being Our Neighbor's Neighbor
- 144 The Old Folks at Home: Reflections

News

- 146 National News
- 147 Announcements
- 151 Continuing Medical Education Opportunities

Departments

- 144 In Memoriam
- 145 New Members
- 145 Personal News
- 145 Physician's Recognition Award Recipients
- 155 Placement Service
- 156 Information for Authors
- 156 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

DRAMATIC NEW CLINICAL PROOF*

In the treatment of impetigo—

- **100% cure rate with Tegopen®** (cloxacillin sodium)
- **only a 60% cure rate with penicillin V-K**



As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. No treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular.

(12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Journal of the Tennessee Medical Association

Vol. 75, No. 3
MARCH, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

Allen S. Edmonson, M.D.
P. O. Box 4899
Memphis, 38104

PRESIDENT-ELECT

George W. Holcomb, Jr., M.D.
218 20th Ave. North
Nashville, 37203

CHAIRMAN, BOARD OF TRUSTEES

James C. Bradshaw, Jr., M.D.
404 E. Spring St.
Lebanon, 37087

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gant

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees far and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only. Second Class postage paid at Nashville, TN. POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

Contents

Original Contributions

- 175 **Medicine and Government—A China Experience**—George W. Holcomb, Jr., M.D.
- 180 **Blindness in Tennessee in 1980-1981**—Stephen S. Feman, M.D.; Marsha K. Penn, M.D.
- 182 **Umbilical Vessel Trauma: A Potentially Fatal Complication of Amniocentesis**—C. John Painter, M.D.; R. Daniel Braun, M.D.
- 184 **Case Report—Solitary (Localized) Pleural Mesothelioma: A Case Report With Brief Review of the Literature**—Anh H. Dao, M.D.; Song W. Wong, M.D.
- 187 **Clinical Note—Calcium Channel Blockers—Verapamil and Nifedipine**—Fred L. Haley, M.D.

Special Features

- 225 **Notes on Medical History—Rheumatologists Note: Letter From Dr. James Roane to David Campbell, Abingdon, Va.**—Thomas Fite Paine, Jr., M.D.

AMA 1981 Annual Meeting Reports

- 197 **Organ Donor Recruitment**
- 199 **Drug Abuse Related to Prescribing Practices**
- 202 **Acupuncture**

Regular Features

- 205 **EKG of the Month**
- 207 **Public Health Report—Laboratory Training Services Provided by the Tennessee Department of Public Health**

TMA Organizational

- 226 **Highlights of the TMA Board of Trustees Meetings—January 9-10, 1982**

President's Page

- 215 **Get Elected?**

Editorials

- 216 **It's an Ill Wind—**
- 217 **On Taking a Stand: George Washington Remembered**

News

- 220 **National News**
- 222 **Announcements**
- 223 **Continuing Medical Education Opportunities**
- 228 **Medical Briefs**

Departments

- 218 **Our Mail Box**
- 218 **In Memoriam**
- 219 **New Members**
- 219 **PRA Recipients**
- 220 **Personal News**
- 229 **Placement Service**
- 230 **Information for Authors**
- 230 **Advertisers in this Issue**

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

DRAMATIC NEW CLINICAL PROOF*

In the treatment of impetigo -

- **100% cure rate with Tegopen®** (cloxacillin sodium)

- **only a 60% cure rate with penicillin V-K**



As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. No treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular.

(12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Journal of the Tennessee Medical Association

Vol. 75, No. 4
APRIL, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

Allen S. Edmonson, M.D.
P. O. Box 4899
Memphis, 38104

PRESIDENT-ELECT

George W. Holcomb, Jr., M.D.
218 20th Ave. North
Nashville, 37203

CHAIRMAN, BOARD OF TRUSTEES

James C. Bradshaw, Jr., M.D.
404 E. Spring St.
Lebanon, 37087

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gant

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only. Second Class postage paid at Nashville, TN. POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

Contents

Original Contributions

- 247 Commentary—Gamboling on the Vegas: The 1981 AMA Interim Meeting—*John B. Thomison, M.D.*
253 Transsphenoidal Microsurgery of Pituitary Tumors—*James T. Robertson, M.D.; J. Kenyon Rainer, M.D.*

Special Features

- 286 The New President—*George W. Holcomb, Jr., M.D.*

AMA 1981 Interim Meeting Report

- 257 Essentials for the Accreditation of Sponsors of Continuing Medical Education

AMA 1981 Annual Meeting Report

- 260 Electronic Fetal Monitoring

Regular Features

- 269 Medical Grand Rounds—Primary Fibrinolysis
276 EKG of the Month
278 Radiology Case of the Month
280 Public Health Report—Stress Management Program

President's Page

- 285 Pleasure

Editorials

- 288 Burnout
289 Through a Glass Brightly

News

- 292 Medical News in Tennessee
292 National News
293 Announcements
295 Continuing Medical Education Opportunities

Departments

- 290 In Memoriam
290 New Members
291 Personal News
291 Physician's Recognition Award Recipients
299 Placement Service
300 Information for Authors
300 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

DRAMATIC NEW CLINICAL PROOF*

In the treatment of impetigo—

- **100% cure rate with Tegopen®** (cloxacillin sodium)
- **only a 60% cure rate with penicillin V-K**



As seen on admission



After one week of penicillin V-K therapy



Two weeks after initiation of TEGOPEN therapy

Treatment failure was judged to have occurred when lesions increased in size and/or number during the initial week of treatment with penicillin V-K. No treatment failures occurred with Tegopen.

*Data on file, Bristol Laboratories.

Brief Summary of Prescribing Information

TEGOPEN®
(cloxacillin sodium)
Capsules and Oral Solution

For complete information, consult Official Package Circular.

(12) 9/11/75

INDICATIONS:

Although the principal indication for cloxacillin sodium is in the treatment of infections due to penicillinase-producing staphylococci, it may be used to initiate therapy in such patients in whom a staphylococcal infection is suspected. (See Important Note below.)

Bacteriologic studies to determine the causative organisms and their sensitivity to cloxacillin sodium should be performed.

IMPORTANT NOTE

When it is judged necessary that treatment be initiated before definitive culture and sensitivity results are known, the choice of cloxacillin sodium should take into consideration the fact that it has been shown to be effective only in the treatment of infections caused by pneumococci, Group A beta-hemolytic streptococci, and penicillin G-resistant and penicillin G-sensitive staphylococci. If the bacteriology report later indicates the infection is due to an organism other than a penicillin G-resistant staphylococcus sensitive to cloxacillin sodium, the physician is advised to continue therapy with a drug other than cloxacillin sodium or any other penicillinase-resistant semi-synthetic penicillin.

Recent studies have reported that the percentage of staphylococcal isolates resistant to penicillin G outside the hospital is increasing, approximating the high percentage of resistant staphylococcal isolates found in the hospital. For this reason, it is recommended that a penicillinase-resistant penicillin be used as initial therapy for any suspected staphylococcal infection until culture and sensitivity results are known.

Cloxacillin sodium is a compound that acts through a mechanism similar to that of methicillin against penicillin G-resistant staphylococci. Strains of staphylococci resistant to methicillin have existed in nature and it is known that the number of these strains reported has been increasing. Such strains of staphylococci have been capable of producing serious disease, in some instances resulting in fatality. Because of this, there is concern that widespread use of the penicillinase-resistant penicillins may result in the appearance of an increasing number of staphylococcal strains which are resistant to these penicillins.

Methicillin-resistant strains are almost always resistant to all other penicillinase-resistant penicillins (cross-resistance with cephalosporin derivatives also occurs frequently). Resistance to any penicillinase-resistant penicillin should be interpreted as evidence of clinical resistance to all, in spite of the fact that minor variations in *in vitro* sensitivity may be encountered when more than one penicillinase-resistant penicillin is tested against the same strain of staphylococcus.

CONTRAINDICATIONS:

A history of a previous hypersensitivity reaction to any of the penicillins is a contraindication.

Journal of the Tennessee Medical Association

Vol. 75, No. 5
MAY, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

Jahn B. Thomisan, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

Allen S. Edmanson, M.D.
P. O. Box 4899
Memphis, 38104

PRESIDENT-ELECT

George W. Holcomb, Jr., M.D.
218 20th Ave. North
Nashville, 37203

CHAIRMAN, BOARD OF TRUSTEES

James C. Bradshaw, Jr., M.D.
404 E. Spring St.
Lebanon, 37087

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Danald H. Alexander

DIRECTOR OF CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ran E. Gant

STAFF ATTORNEY

Jack Fasbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

Contents

Original Contributions

- 313 The Violent Patient—Differential Diagnosis and Management—*Pauline L. Rabin, M.D.; John Koomen, M.D.*
- 318 Obstetrical Considerations for the Working Woman—*Stephen S. Entman, M.D.*
- 321 Role of Brachytherapy in the Management of Recurrent Carcinoma of the Head and Neck—*Subir K. Nag, M.D.; Manuel Vider, M.D.; Charles L. Neely, Jr., M.D.; Alan Pritchard, M.D.; Douglas L. Tai, Ph.D.*
- 325 Case Report—Elevated CSF Protein in Uremia and Dehydration—*Sethumadhavan V. Solammadevi, M.D.*

AMA 1981 Interim Meeting Reports

- 329 Health Manpower

Special Features

- 335 NIH Consensus Development Conference Summary—Coronary Artery Bypass Surgery: Scientific and Clinical Aspects

Regular Features

- 339 CAT Scan of the Month
- 340 EKG of the Month
- 342 Public Health Report—A New Challenge for Venereal Disease Control

President's Page

- 351 A New Beginning

Editorials

- 352 Less for More
- 353 Words From On High—A Morality Play
- 353 Changing Times: Dabachery, Disaster, and Dismay

News

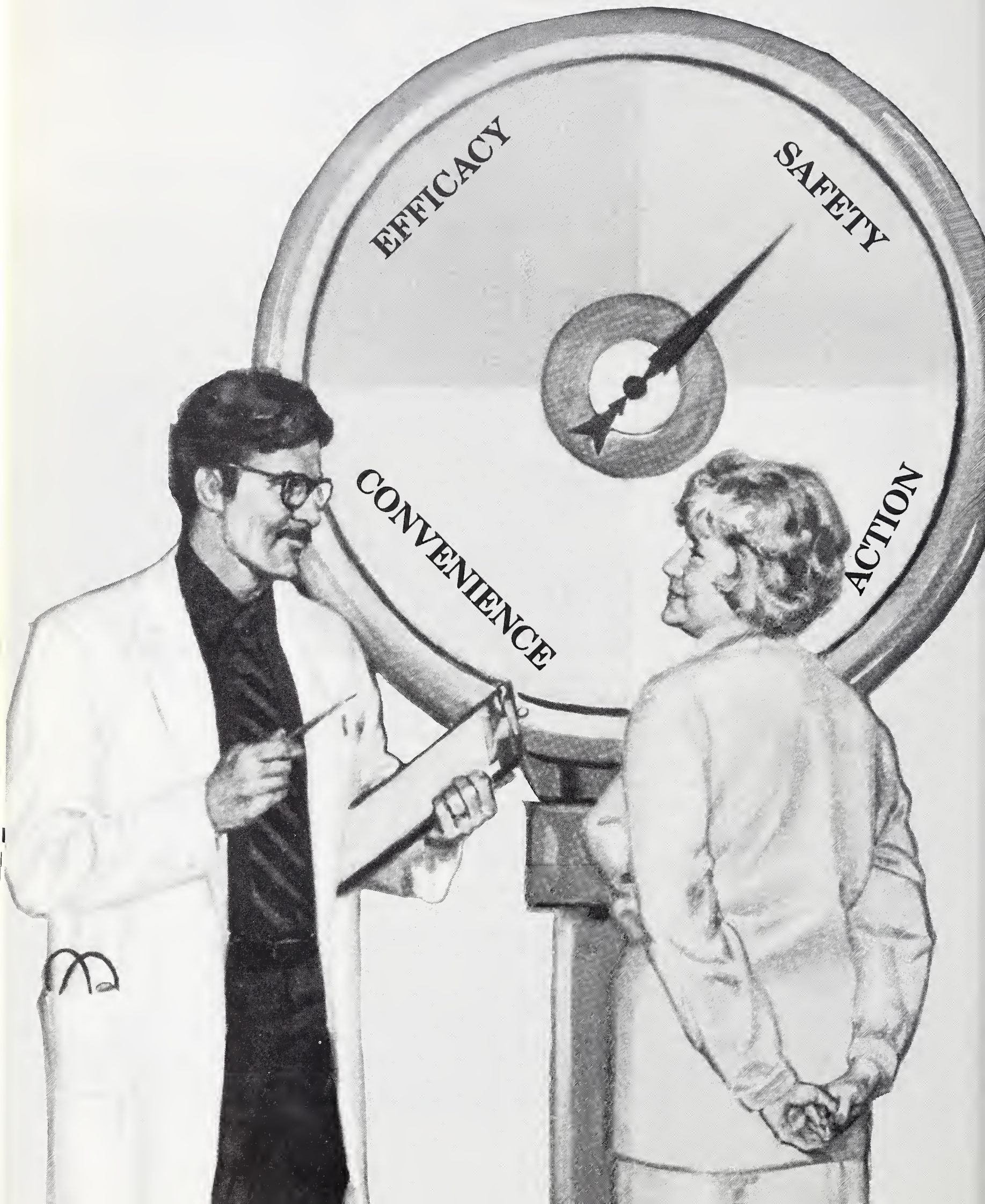
- 355 National News
- 358 Announcements
- 359 Continuing Medical Education Opportunities
- 363 Medical Briefs

Departments

- 354 In Memoriam
- 354 New Members
- 355 Personal News
- 355 PRA Recipients
- 365 Placement Service
- 366 Information for Authors
- 366 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

When your overweight patients seek your help with a weight reduction plan...



Journal of the Tennessee Medical Association

Vol. 75, No. 6
JUNE, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

George W. Holcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Nat E. Hyder, Jr., M.D.
403 Princeton Rd.
Johnson City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Galyon, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gant

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association.

Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to
Journal of the Tennessee Medical
Association, 112 Louise Ave.,
Nashville, TN 37203.

Contents

Proceedings

- 381 Index to Proceedings
- 383 Abstract of the Proceedings of the House of Delegates of the Tennessee Medical Association, *Memphis, Tennessee—April 14-17, 1982*
- 405 House of Delegates Composition
- 406 Photographic Highlights of the TMA's 147th Annual Meeting

AMA 1981 Interim Meeting Reports

- 410 Coalitions for Health Care
- 411 Physician and Public Education on the Medical Consequences of Thermonuclear Warfare

TMA Organizational

- 431 Highlights of the TMA Board of Trustees Meetings—*April 14 and April 17, 1982*
- 435 Group Insurance Plans Available to TMA Members
- 436 County Medical Society Officers 1982-1983
- 437 Officers and Committee Members 1982-1983

President's Page

- 417 Why the TMA Annual Meeting?

Editorials

- 418 Fancies and Fantasies: The House, Vintage 1982
- 419 Keep Fingers Flaccid for Placid Passage

News

- 422 National News
- 424 Announcements
- 429 Continuing Medical Education Opportunities

Departments

- 420 In Memoriam
- 420 New Members
- 421 Personal News
- 422 Physician's Recognition Award Recipients
- 443 Placement Service
- 444 Information for Authors
- 445 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

YOUR JOB IS MEDICINE

However, there is a business side to the practice of medicine.

OUR JOB IS . . .

business consulting and financial management specifically for physicians. A principal of our firm is married to a physician.

Our services include ideas or methods regarding:

- Office Sharing & Expenses
- Pension/Profit Sharing Plans
- Tax Alternatives
- Accounts Receivable
- Renting vs. Building
- Pros & Cons of a P.C.
- Practice-building Techniques
- Offer To a New Physician
- Sale of a Practice

Nashville
2120 Crestmoor Road
Nashville, TN 37215
(615) 383-3289



Memphis
5100 Poplar Ave. Suite 2812
Memphis, TN 38137
(901) 685-8305

the Consulting Group

Initial Consultation at No Charge

Daytime and Evening Hours

Journal of the Tennessee Medical Association

Vol. 75, No. 7
July, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

George W. Holcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Nat E. Hyder, Jr., M.D.
403 Princeton Rd.
Johnson City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Galyon, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gant

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

contents

Original Contributions

- 457 Pro-Competition Legislation: Friend or Foe?—*Dr. Winfield Dunn*
462 New Directions in Health Care Financing—A Physician's Comment—*T. Reginald Harris, M.D.*

Special Features

- 469 Special Item—The Hospital—Mistake or Mystique?—*John H. Griscom, M.D.*
471 Viewing Box—Inroads—*Carl Cooper, Jr., M.D.*

AMA 1981 Interim Meeting Reports

- 503 Definition of Competition

Regular Features

- 475 Oncology Grand Rounds—Bone Metastases: Diagnosis and Management
480 Diabetes-Endocrine Conference
483 EKG of the Month
485 Radiology Case of the Month
487 Public Health Report—Physician Recruitment Program

President's Page

- 493 As Others See Us

Editorials

- 494 Inroads
495 Thoughts for the Fourth
495 Shifting Sands

News

- 497 National News
500 Announcements
501 Continuing Medical Education Opportunities

Departments

- 496 In Memoriam
496 New Members
497 Personal News
497 PRA Recipients
507 Placement Service
508 Information for Authors
508 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

HYPERTENSION:



journal of the tennessee medical association

Vol. 75, No. 8
AUGUST, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

Jahn B. Thamisan, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

George W. Halcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Nat E. Hyder, Jr., M.D.
403 Princetan Rd.
Jahnsan City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Galyan, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Danald H. Alexander

DIRECTOR OF CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ran E. Gant

STAFF ATTORNEY

Jack Fasbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to
Journal of the Tennessee Medical
Association, 112 Louise Ave.,
Nashville, TN 37203.

contents

Original Contributions

- 525 Hemiplegia—An 11-Year Summary—*William T. Satterfield, M.D.*
530 The Nashville Academy of Medicine "Yankee Gunboat" Gavel—*Robert W. Ikard, M.D.*
533 Case Report—Steatorrhea as the Presenting Manifestation of Adenocarcinoma of the Colon—*Sethu V. Madhavan, M.D.*
535 Case Report—Prolonged Postoperative Succinylcholine-Induced Apnea With Pseudocholinesterase Deficiency—*Sung J. Chung, Ph.D., M.D.; Douglas Andrews, M.D.*

Special Features

- 537 Special Item—The Two Faces of Opportunity—*John H. Burkhardt, M.D.*

Regular Features

- 543 Medical Grand Rounds—Management of Hyperlipidemia in Coronary Artery Disease
548 CAT Scan of the Month
549 Public Health Report—Benefits of Childhood Immunization Programs
550 EKG of the Month

President's Page

- 559 Medical Costs—The Good News and the Bad

Editorials

- 560 Into and Out of the Quagmire—We Hope
562 On the Intimation of Mortality

News

- 564 National News
568 Announcements
569 Continuing Medical Education Opportunities

Departments

- 562 Our Mail Box
563 In Memoriam
563 New Members
563 Personal News
564 Physician's Recognition Award Recipients
573 Placement Service
574 Information for Authors
574 Advertisers in this Issue

Pinworms work the night shift



Artist's interpretation:

The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.



Journal of the Tennessee Medical Association

Vol. 75, No. 9
September, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomson, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

George W. Holcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Nat E. Hyder, Jr., M.D.
403 Princeton Rd.
Johnson City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Galyon, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donold H. Alexonder

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingrom

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gant

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

Contents

Original Contributions

- 587 The Program of In Vitro Fertilization at Vanderbilt Medical Center—*Anne Colston Wentz, M.D.*
594 Case Report—Bacteremic Group G Streptococcal Septic Arthritis—*Humberto Coto, M.D.; Kathleen Gage, M.D.; Okechukwu Ekenna, M.D.; Steven L. Berk, M.D.*

Special Features

- 635 Notes on Medical History—Medicine in the Middle Ages: A Brief Summary—*Albert G. Dittes, M.D.*

Regular Features

- 601 Medical Grand Rounds—Preventive Cardiology: The Physician's Role in Risk Factor Reduction
608 EKG of the Month
610 Public Health Report—Health Promotion Program

TMA Organizational

- 633 Highlights of the TMA Board of Trustees Meeting—July 11, 1982

President's Page

- 613 Decisions, Decisions, Decisions

Editorials

- 614 "Primum Non Nocere" Means Safety First
615 On Disposing of the Fruits of Our Labor
615 Eating Crow
616 On Equal Protection

News

- 619 Medical News in Tennessee
620 National News
623 Announcements
626 Continuing Medical Education Opportunities

Departments

- 617 Our Mail Box
618 In Memoriam
618 New Members
619 Personal News
619 PRA Recipients
637 Placement Service
638 Information for Authors
638 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

HYPERTENSION:



Journal of the Tennessee Medical Association

Vol. 75, No. 10
October, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jeon Wishnick

TMA OFFICERS

PRESIDENT

George W. Halcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Not E. Hyder, Jr., M.D.
403 Princeton Rd.
Jahnsan City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Galyon, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Danald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wolloce

EXECUTIVE ASSISTANT

Thamos Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gont

STAFF ATTORNEY

Jack Fasbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to
Journal of the Tennessee Medical
Association, 112 Louise Ave.,
Nashville, TN 37203.

Contents

Original Contributions

- 655 Commentary—A Timely Report From Chicago—The 1982 AMA Annual Meeting—*John B. Thomison, M.D.*
662 Noninvasive Assessment of Carotid Circulation—*John S. Warner, M.D.*
668 Case Report—Limitations of the Computed Tomographic Scan in the Diagnosis of Subdural Empyema—*Larry M. Baddour, M.D.*

AMA 1981 Interim Meeting Reports

- 705 Principles for Voluntary Medical Peer Review
707 Graduate Medical Education National Advisory Committee Final Report

Regular Features

- 678 Medical Grand Rounds—Two Forms of Insulin Resistance
684 EKG of the Month
686 Public Health Report—Boards and Advisory Committees of the Tennessee Department of Public Health

President's Page

- 695 The FTC Challenge

Editorials

- 696 The Really Great One!
697 The Goblins 'll Getcha . . .
697 Or Something 'll Getcha, Anyhow
698 Safety Last

News

- 700 National News
702 Announcements
703 Continuing Medical Education Opportunities

Departments

- 698 Our Mail Box
699 In Memoriam
699 New Members
699 Personal News
700 PRA Recipients
709 Placement Service
710 Information for Authors
710 Advertisers in this Issue

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

Pinworms work the night shift



Artist's interpretation:

The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.



Journal of the Tennessee Medical Association

Vol. 75, No. 11
November, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thamison, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hadley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

George W. Halcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Nat E. Hyder, Jr., M.D.
403 Princetian Rd.
Johnson City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Galyon, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hadley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF

CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wallace

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ran E. Gant

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association.

Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to Journal of the Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203.

Contents

Original Contributions

- 729 **Cervical Cancer in Two Southern Appalachian Counties**—Robert C. Donaldson, M.D.; Dillard M. Sholes, Jr., M.D.
733 **Case Report**—Fibromuscular Dysplasia in Alport's Syndrome—L. B. Hudgins, M.D.; J. P. Limbacher, II, M.D.

Special Features

- 736 **Special Item**—Report of the Maternal Mortality Subcommittee of the TMA Maternal and Child Care Committee
743 **Special Item**—Another New Tax Law Affects Physicians Significantly—Geoffrey T. Anders, J.D., C.P.A.; Leif C. Beck, LL.B., CPBC; J. Thomas Martin, J.D.; Michael J. Gannon, J.D.

AMA 1982 Annual Meeting Reports

- 775 **Final Order of the Federal Trade Commission**

Regular Features

- 748 **Medical Grand Rounds**—Alcoholic Hepatitis
753 **CAT Scan of the Month**
754 **EKG of the Month**—A Problem in Pacing
756 **Public Health Report**—Refugees in Tennessee—An Overview

President's Page

- 765 **The Outreach of Government**

Editorials

- 766 **On the Ascent of Man**
767 **Southern Exposure**

News

- 769 **Medical News in Tennessee**
769 **National News**
772 **Announcements**
777 **Continuing Medical Education Opportunities**

Departments

- 768 **Our Mail Box**
768 **In Memoriam**
768 **New Members**
769 **Personal News**
769 **PRA Recipients**
779 **Placement Service**
780 **Information for Authors**
780 **Advertisers in this Issue**

Contents listed in CURRENT CONTENTS/CLINICAL PRACTICE
of the Institute for Scientific Information

HYPERTENSION:



Journal of the Tennessee Medical Association

Vol. 75, No. 12
December, 1982

Office of Publication
112 Louise Ave., Nashville, 37203
(615) 327-1451

EDITOR

John B. Thomson, M.D.
P. O. Box 70
Nashville, 37202

BUSINESS MANAGER

L. Hodley Williams

MANAGING EDITOR

Jean Wishnick

TMA OFFICERS

PRESIDENT

George W. Holcomb, Jr., M.D.
218-20th Ave. North
Nashville, 37203

PRESIDENT-ELECT

Not E. Hyder, Jr., M.D.
403 Princeton Rd.
Johnson City, 37601

CHAIRMAN, BOARD OF TRUSTEES

James T. Golyon, M.D.
6005 Park Ave.
Memphis, 38138

TMA EXECUTIVE STAFF

EXECUTIVE DIRECTOR

L. Hodley Williams

ASSISTANT EXECUTIVE DIRECTOR

Donald H. Alexander

DIRECTOR OF CONTINUING MEDICAL EDUCATION

James D. Ingram

EXECUTIVE ASSISTANT

William V. Wollock

EXECUTIVE ASSISTANT

Thomas Wilkerson

EXECUTIVE ASSISTANT

Ron E. Gont

STAFF ATTORNEY

Jack Fosbinder

The Journal of the Tennessee
Medical Association
ISSN 0040-3318

Published monthly under the direction of the Board of Trustees for and by members of the Tennessee Medical Association, a nonprofit organization with a definite membership for scientific and educational purposes.

Devoted to the interests of the medical profession of Tennessee. This Association does not officially endorse opinions presented in different papers published herein. Advertisers must conform to policies and regulations established by the Board of Trustees of the Tennessee Medical Association. Subscriptions: (nonmembers) \$12 per year for US & Canada; \$15 for foreign. Single copy \$1. Payment of Tennessee Medical Association membership dues includes the subscription price of this Journal.

Copyright 1982, Tennessee Medical Association. All material subject to this copyright appearing in the Journal may be photocopied for noncommercial scientific or educational use only.

Second Class postage paid at Nashville, TN.

POSTMASTER: Send address changes to
Journal of the Tennessee Medical
Association, 112 Louise Ave.,
Nashville, TN 37203.

contents

Original Contributions

- 795 Mediastinal Drainage—A Different Technique—David R. Pickens, Jr., M.D.; J. L. Farringer, Jr., M.D.; Richard B. Terry, M.D.
798 Case Report—Hepatic Uptake of a Bone Scanning Agent in Alcoholic Hepatitis—Jane L. Tyler, M.D.; Thomas A. Powers, M.D.

Special Features

- 802 Special Item—Views of an LMD—Gerald I. Plitman, M.D.

Regular Features

- 808 Radiology Case of the Month
810 Public Health Report—Update: Tuberculosis in Tennessee
812 EKG of the Month

TMA Organizational

- 832 Highlights of the TMA Board of Trustees Meeting—October 3, 1982
837 1982 Membership Roster
854 Index to Volume 75

President's Page

- 819 Once Again December

Editorials

- 820 Shalom
821 Health Care Costs, Or, The Sheep-Clad Wolf
822 Gift

News

- 824 National News
827 Announcements
829 Continuing Medical Education Opportunities

Departments

- 823 Our Mail Box
823 In Memoriam
823 New Members
824 Personal News
824 PRA Recipients
859 Placement Service
860 Information for Authors
860 Advertisers in this Issue

Pinworms work the night shift



Artist's interpretation:

The nocturnal egg-laying of the female pinworm causes acute perianal itch...making children shift sleeplessly through the night.



Management of Varicose Veins By Surgery and By Injection

MALCOLM R. LEWIS, M.D.

The treatment of varicose veins dates to the second century A.D. when Galen¹ recommended that they be torn out by a hook. Following the introduction of anesthesia in the 19th century, a growing sophistication in treatment evolved. When the importance of incompetence of the saphenous system was recognized, thorough ligation of the saphenous vein and all its tributaries began. To this was added ligation of perforating veins and stripping of the long, and perhaps, short saphenous veins. It was thought that all the distal tributaries would atrophy as connection with the saphenous was avulsed, but disappointingly frequent recurrences (or persistence) finally led to the more painstaking modern operation.

Nonoperative Management

There is a strong familial tendency in varicose veins, and obesity, pregnancy and prolonged standing or lifting all contribute to their formation. Elastic support is the mainstay of noninvasive management as well as of prophylaxis. This is best provided as a graded-tension elastic stocking of such as Jobst® or Sigvaris®, which can be ordered in any length from knee-length to leotard.

The injection treatment of dermal varicosities or "spider veins" (Fig. 1) is receiving increasing attention in this country. Actually, these varicosities often contain an arterial as well as the



Figure 1. Typical dermal or "spider" varicosities which are best treated by injection.

venous component, and both types respond to injection. This is done with a 30-gauge needle using 1% Sotradecol® and magnification. Placement of the needle in the vein is largely by "feel" since aspiration of blood is usually not feasible with this small needle. Only small amounts, 0.25 cc or so, are used at each site. If successful, one injection will eradicate a considerable area of variceal formation. Although this sometimes leaves a brownish spot, the result is usually cosmetically superior to that which it replaces.² I have chosen to start this treatment

From the Departments of Surgery, Vanderbilt University, St. Thomas, Park View, and Baptist Hospitals, Nashville.

with a single injection to detect patients who may be unduly sensitive to the sclerosant.

Injection treatment of large varicose veins is widely practiced in England³ and in a number of other countries, but has met with only limited acceptance in this country.⁴

Surgical Management

Many bad surgical results can be avoided by realizing that failure often follows operation on varicose veins in postphlebotic legs. Failure can also result from a bifid saphenous vein or from congenital anomalies. For this reason, unusual varicose veins and recurrent varicose veins are usually evaluated with preoperative phlebography.^{5,6}

The modern operation combines high ligation of the saphenous and all its tributaries, stripping of the saphenous veins, and radical removal of all tributaries in the thigh, leg and foot through multiple incisions of approximately 1 cm throughout the extent of all detectable varicosities (Fig. 2). Elastic bandages are applied and the patient is discharged when able to care for himself, usually on about the third to fifth postoperative day. In recent years increasing attention has been paid to preserving the long saphenous vein when it is uninvolved. This vein has proven so useful in femoropopliteal and coronary artery grafting that its sacrifice for prophylaxis is not warranted.

The results of the operation as described have been quite satisfactory and have met with a high degree of patient acceptance on both a functional and cosmetic basis. Dermal varicosities remaining after ligation and stripping are often dealt with in the office postoperatively by injection to complete the treatment. Recurrences are unusual with this very radical obliteration of varicosities and can often be dealt with by fairly simple means, such as outpatient removal or injection.



Figure 2. Multiple small incisions in a 33-year-old woman four weeks after surgery.

Approximately 400 legs in 224 patients have been so treated, with no deaths and no significant infections. As with any surgical procedure, deep-vein thrombophlebitis can develop, but has a surprisingly low incidence, and I can remember only one case in these 224 patients.

520 Mid-State Medical Ctr.
Nashville, TN 37203

REFERENCES

1. Allen EV, Barker NW, Hines EA Jr: *Peripheral Vascular Diseases*, ed 3. Philadelphia, W. B. Saunders Co, 1962, p 636.
2. Dee R, Gomes MN, O'Donnell TF: Cosmetic therapy; Why can be done for spider veins? (Abstracted by Y Cooperman, writer.) *Patient Care*, Nov. 15, 1978.
3. Hobbs JT: The treatment of varicose veins. *Br J Surg* 55:77, 1968.
4. Tunick AM: An internist looks at varicose veins. *Contemp Surg* 11:11, Aug 1977.
5. Lewis MR, Dale WA: Practical value of phlebography. *South Med J* 73:9-13, 1980.
6. Lewis MR, Dale WA: Phlebography as a clinical tool. *Surg Gynecol Obstet* 133:301-303, 1971.

ERRATUM

Richard E. Thompson, M.D. (Medical Care in the '80s, Quality Assurance. *J Tenn Med Assoc* 74:801-806, Nov 1981) was erroneously listed as a member of the Board of the Joint Commission on Accreditation of Hospitals (JCAH). Dr. Thompson is president of Thompson, Mohr & Associates, a private consulting firm. He is not, nor has he ever been, a member of the Board of JCAH. The JOURNAL regrets any inconvenience the error may have caused.

A Whole Life Is Watching at the Tonsillectomy

J. C. GROS, M.D.

To write this paper, I have made use of all my memories about tonsillectomy. I have tried to revisit all the hospitals where I have been doing surgery, from the old ones with their ghosts of doctors and nurses, to the last ones. Like in a parade, all the intervening people—teachers, surgeons, anesthesiologists, assistants, nurses and patients—are marching in front of us. Let us see if the way they tried to solve the delicate situations they had to face may be useful in our present management of these cases.

At the beginning—the very, very beginning—the only technique of tonsillectomy we learned was the dissection technique. Call it “Waugh’s operation,” since George E. Waugh, an English surgeon, is credited with describing it in 1909¹; or if you prefer, name it the “Boston method,” as it appears in the Loeb book of ENT surgery.²

In Cuba, my country of origin, our technique came directly from two I love to remember: Claudio Basterrechea and Enrique Fernandez Soto. Basterrechea was the chairman of the University of Havana ENT Department; he was the creator of and propagandist for local anesthesia, and all the patients above 15 years of age were operated upon under local, except for those with a severe gag reflex. It is unquestioned that under local anesthesia the operation is more bearable to the patient, and more economical; after five hours, with the wounds in good condition, the patient may be sent home to be followed in the office; we have supported this policy without regret.

Fernandez Soto, who was a fine poet too, traveled very much during his life, trying always to learn. He introduced in Havana the use of the

semicurved Dean knife, which in my opinion is the safest instrument for dissecting the tonsil; he used transnasal suction with a French catheter after adenoidectomy, allowing a complete check of the nasopharynx with a small laryngeal mirror aided by a soft palate retraction. It was he whom I saw use the Coackley knots to tie the bleeding vessels, a procedure I find safer than transfixion with suture ligatures.

Indications

Tonsillectomy is not an emergency but an opportunity operation. Its most frequent indication is chronic infection or exaggerated hypertrophy in children. Tumors are another indication, although only a small number of patients have tumors sufficiently limited to be resectable by this operation.

How do we make the diagnosis of chronic infection? Fernandez Soto, in a well-written paper entitled “Indications and Contraindications of Tonsillectomy,” stated that infection of the lymph node 2 cm below the angle of the jaw was a sign of the utmost importance. In children and teenagers, the history is conclusive. A past history of peritonsillar abscess, with three or four acute crises during one or two years,³ whether the patient was below or above 7 years of age, are enough to recommend the operation. Adults, after suffering several crises in their youth, seem to develop a humoral defense which makes the crises so effaced that to be sure they are having subacute tonsillitis, we ask them to see us when they have the malaise they are describing.

Bacteriological examination of secretions taken from the tonsillar surface is somewhat discredited today; bacteria inside the crypts do not appear in the culture,⁴ and the association of viruses with bacteria are mentioned as reasons. An analysis of the value of the bacteriologic examination made recently⁵ concludes that the most important factor is the number of bacteria

From the University of Miami School of Medicine, Miami. Dr. Gros is emeritus professor of otolaryngology and maxillofacial surgery at the University of Tennessee College of Medicine.

Read before the VI Cuban Medical Convention, Miami Beach, June 30-July 4, 1981.

Reprint requests to 1980 Coral Way, Miami, FL 33145 (Dr. Gros).

found in a cubic centimeter of tonsillar tissue, a measurement that can be done only in excised tonsils. The study shows that tonsils with crypts less numerous are the most septic, and that the size of the tonsils is irrelevant.

I am convinced that tonsillectomy is a useful operation, which sometimes has enjoyed great popularity and sometimes has been submitted to severe criticism. Immunologists attribute a great defensive role to the tonsils. The production of antibodies by the T-lymphocytes decreases the operation, reducing the defenses of the body⁶; Muchmore,⁷ of the National Cancer Institute in Bethesda, Md., says: "It is believed that tonsils may be an important site for antibody production against mouth and respiratory pathogens. However, removal of tonsils has no gross effect on antibody levels. It has been suggested that poliomyelitis and Hodgkin's disease have increased incidence following childhood tonsillectomies, but evidence of this is not convincing."

The truth is that frequently we hear the mother saying that colds have disappeared after the child was operated on.

The Operation

There is no uniform tonsillectomy. Each surgeon has his own procedure and his own tricks to achieve the same result, and generally speaking all the techniques are good if done with care. After making an incision on the anterior pillar, I use the Dean semicurved knife to dissect the tonsil, the Coackley hemostatic knots, the snare, and the transnasal suction after adenoidectomy. The operations made with the Sluder and the La Force instruments are equally good.

Complications

Tonsillectomy is a major operation; it has complications and mortality, and many people, including physicians, do not realize this. This is a disadvantage for us. The complications may be originated by the anesthesia or by the operation.

First of all, local anesthesia has lost its popularity, and today is only scarcely used. I still use it once in a while in adults with a very tolerant throat. My preference is a mixture of 1% plain lidocaine (Xylocaine) with an equal part of 1% lidocaine with epinephrine. Of this mixture, 20 cc is enough. I use a needle with short bevel and 1-inch length, making the injections just above

the upper pole, lateral to the middle third, and at the pedicle; superficial injections are made at the posterior pillar and at the plica triangularis. If the needle crosses the tonsillar tissue before entering into the peritonsillar space, we may transfer the tonsil bacteria deeper into the neck, provoking serious complications, such as abscesses of the parapharyngeal space.⁸ In my early days, I remember two patients who had a small peritonsillar infection in the first postoperative week, which I needed to drain through the anterior pillar. This complication may be prevented by changing the needle as soon as we see the injected solution running out from the crypts.

A second complication of the local anesthesia is a transitory facial paralysis from entrance of the anesthesia in the parapharyngeal space, due to a too-deep injection or to an anomalous communication between the peritonsillar and the parapharyngeal spaces, and absorption of the anesthetic by the deep lobe of the parotid gland.⁹

General anesthesia has improved very much since the days of the transoral ether inhalation with the Sorensen pump. For a time, halothane, with 0.5 mg succinylcholine per pound of weight and atropine 0.1 to 0.2 mg was considered an ideal anesthetic for tonsillectomies,¹⁰ until two serious complications, malignant hyperthermia and dual block apnea, both of them due to a congenital defect preventing the normal metabolism of the succinylcholine,^{11,12} appeared. In some hospitals, succinylcholine is no longer used; in others its use is limited to cases with cardiac arrhythmias, and in these cases, 3 mg of intravenous curare is used to prevent possible fasciculations (personal communication). In some places, halothane has been substituted by ether.

The most frequent complication is hemorrhage. Basterrechea said that posttonsillectomy hemorrhage occurs from four hours to four days after the operation; we add seven days later, this last the most serious.

Surgeons have to be thoroughly familiar with hemostasis, its diseases, and ways to test it. More than once we have heard in staff meetings that the best coagulation test was the history of the patient. This is not accurate. Hemostasis, like all other functions of the human body, may be distorted, and nutritional, environmental, metabolic, or emotional problems, and some drugs, may modify it. As a consequence, I order a battery of tests covering blood coagulation,

and the vascular and platelet function. Perhaps this policy may look ridiculous, but I feel better when all the results come out within normal limits. And of course, we have to be familiar, too, with the drugs we may need in some cases: Avitene, Thrombin, Surgicel, vitamins K and C, and platelet factor III, which according to Quick is found in the soybean phospholipids.¹³

After a few years we abandoned the policy of accumulating all tonsillectomies for one day of the week. We got the idea that after the third operation, both surgeon and anesthetist become apathetic in their work; their interest in the second three cases is less than at the beginning. The only patient in whom we had some anesthesia problem was one on one of those days with six tonsillectomies; in the last case, that of a 12-year-old girl, we had to fight a crisis of apnea-anoxia requiring several minutes of artificial respiration.

First-day hemorrhage sometimes starts with the patient still in the recovery room. To detect these cases early, Dr. Trujillo, chairman of the anesthesia department at Coral Gables Hospital, orders the nurse in the recovery room to watch the frequency of swallowing motions, following the laryngeal elevations. If there are more than ten swallowings per minute, the surgeon is called to inspect his patient; if needed, he is taken to the operating room for a ligature (personal communication).

Fourth-day hemorrhage is the easiest to solve. It occurs in teenagers or in young adults, and has been attributed to the sloughing of the eschar. I do not like this explanation; I think it due to a transitory change of hemostasis ordinarily of emotional origin. Why do we not see this type of bleeding in children below 7 years of age? I have had several cases in this category, the last in a young lady who had an excellent operation. Feeling pretty well on the fifth postoperative day, against my advice she went to enjoy an afternoon on the beach with her boyfriend. That evening, I had to go to the hospital and compress the bleeding fossa with a sponge soaked in hot saline solution, in addition to giving vitamin K intramuscularly. Patients between 15 and 30 years old are bound to have this complication; excessive fear may provoke it too. That is why we used to sedate tonsillectomy patients with phenobarbital during the first postoperative week.

Fortunately, seventh-day bleeding, which is the most serious, is infrequent. Perhaps the most

dramatic case I have participated in was while I was an assistant professor in the University of Tennessee College of Medicine.

Case Report

The patient, a 10-year-old boy, had been operated on in another city. The first six postoperative days were spent easily, but on the seventh day he had a severe hemorrhage. He was taken to the hospital, and the accident apparently was controlled, but the next day the hemorrhage recurred, and the following day a third hemorrhage started. Ligature of the external carotid artery was necessary to control the bleeding. The boy went home and spent one month doing fine, but suddenly he again had a massive hemorrhage, as always from the right side. With pressure and local coagulants, the bleeding was stopped, but reappeared afterward. Under the circumstances, the father, who was a physician, called asking me to take care of his son.

In those days, 1963-1964, I had not yet gotten my state medical license, so I asked Dr. Edwin Rise, my colleague in the medical school, to admit the patient to the hospital, and both of us would take care of him. He graciously acceded, and we studied the boy day after day, looking at the tonsillar fossas, nasopharynx, and nasal fossas, trying to find the source of the bleeding, but our search was fruitless. The wounds looked very well healed. We asked consultations with pediatricians, hematologists and neurosurgeons. One of them, Dr. George Picaza, recommended an arteriogram, which showed that a retrograde blood flow from left to right had been established and that the right carotid artery was receiving circulating blood above the ligature. The boy continued in the hospital doing very well.

A second month had elapsed, and during this time there was not any kind of trouble. We thought that whatever the problem, it had had plenty of time to heal, and we were ready to discharge the patient. One or two days before the date we had planned to discharge the boy, late in the afternoon, Dr. Rise and I were still in the clinic. Work had finished, the students had gone, and we were preparing to leave, when the terrifying message came that the boy was bleeding to death. We ran to the hospital where he had been admitted, fortunately just across the sidewalk, where we met a dramatic scene: the mother yelling in the middle of the corridor; in the room, blood everywhere; the transfusionists fighting to get a suitable vein where there was a general collapse. The only thing we could do was to apply a compress under pressure over the right fossa to stop the bleeding, and wait. We kept the pressure for more than one hour; in the meantime a vein had been found, and the patient received enough blood to allow him to be taken to the operating room. There, Dr. Rise, assisted by Dr. Howard Cheek, the senior resident, opened the neck, while I kept the pressure on the right tonsillar fossa. He exposed the neck vessels, ligating the superior thyroid, the lingual, and the facial arteries. Happily this procedure solved the problem, and no additional bleeding occurred. The boy today is a student at Miami University.

Discussion

What had happened in this case? After a general discussion with the whole staff, the opinion of Dr. Sam H. Sanders, chairman of the Department of Otolaryngology and Maxillofacial Surgery at the University of Tennessee College of Medicine, was accepted. It was thought that the original surgeon had with a dissecting instrument accidentally gone through the fibers of the

superior constrictor of the pharynx, entering into the parapharyngeal space. The orientation of its muscular fibers makes it possible to go through them without injuring the muscle; with the instrument came infection and ulceration of one of the external carotid artery branches. Our case was not published due to certain reluctance on the part of the family and to the sudden, unexpected, and regretted death of Dr. Rise. In the medical literature, however, there appears a similar case.¹⁴ The authors used arteriography too, and saved the patient.


Another complication is Grisel disease or the Grisel syndrome, a rare complication which may appear after tonsilloadenoidectomy, and after severe infections of the nasopharynx. The dominant lesion is a spasmodic contraction of the prevertebral muscles attached to the anterior surface of the atlas, provoking an atlantoaxial luxation, nasopharyngeal torticollis, and stiffness of the neck.¹⁵

We have had the opportunity to see this complication in three cases, one of them after a T&A operation, the other two after nasopharyngeal infections. The syndrome is easily recognized by the forced flexion of the head over the chest which is maintained all the time. The treatment is orthopedic extension and antibiotics. Its risk is the possibility of the entrance of the odontoid process of the axis through the foramen magnum, with compression of the respiratory center and sudden death.

In a study made from 1953 to 1965, it appears that there was a mortality of 1.03 per 10,000 operations, but a survey on operative deaths among children¹⁶ showed that tonsillectomy was the operative procedure resulting in the highest number of anesthesia deaths. One study on this subject, read at the Academy of Otolaryngology and Head and Neck Surgery in 1979,¹⁷ where several hospitals were investigated, indicated that in 1972, from a total of 275,746 operations there were 12 deaths. Calculating the total number of tonsillectomies in relation to this result, the authors consider there are 27 deaths in the year.

Not having lost a patient in connection with

this operation, I realize I have been very fortunate; I imagine the death of a patient after tonsillectomy would have a very depressing effect on the surgeon. One of my most brilliant interns lost a patient when due to a mistake, the nurse gave him the 25% tetracaine (Pontocaine) solution, which in those days was colorless, instead of the procaine (Novocain) for the injection in the peritonsillar space. The effect of seeing his patient, a 19-year-old boy, falling on him and dying in a convulsive crisis was so devastating that he quit otolaryngology and went to work in legal medicine, preferring to operate on cadavers rather than living patients. And I know three more cases like this one.

So, you see that tonsillectomy is an operation which has given fame and fortune to many surgeons, and has stopped a small less fortunate group. I am not trying to scare. Surgeons are not men of fear. But I have to emphasize that in this downgraded operation, we have to give the best of care before, during, and after surgery; and this is not all—we have to be lucky too. 

Acknowledgement:

This paper is dedicated to my former residents.—Dr. Gros.

REFERENCES

1. Schmidt JR: *Medical Discoveries, Who and When*. Springfield, Ill, Charles C Thomas Publisher, 1959, p 495.
2. Loeb HW: *Operative Surgery of the Throat, Nose and Ear*. St. Louis, CV Mosby Co, 1919.
3. Reid JM, Donaldson JA: The indications for tonsillectomy and adenoidectomy. *Otolaryngol Clin North Am* 3:339-344, 1970.
4. Lotter AM, Allen GW: Recent observations on the bacteriology of tonsils. *EENT Monthly* 54:97-100, 1975.
5. Sanaki CT, Koss N: Chronic bacterial tonsillitis, fact or fiction. *Trans Am Acad Ophthalmol Otolaryngol* 66:854-864, 1978.
6. Schulkind ML: Tonsillectomy, a cause of immunodeficiency. *Consultant*, 1973, pp 95-97.
7. Muchmore AV: An immunologic overview of the human tonsils. *EENT Monthly* 59:438-446, 1980.
8. Tolezinski B: Tonsillectomy, its hazards and prevention. *EENT Monthly* 48:378-385, 1969.
9. Mercandino P: Paralisi facial consecutiva a anestesia local para tonsilectomia. *El Dia Medico*, Buenos Aires, Dec 19, 1930, p 447.
10. Kortis HI, Dear AL: An anesthetic technic for tonsillectomy. *J Newark Beth Israel Hosp* 16:222-228, 1964.
11. McStravog LJ: Dangers of succinylcholine in anesthesia. *Laryngoscope* 84:929-932, 1974.
12. Snow JC, et al: Malignant hyperthermia during anesthesia for adenoidectomy. *Arch Otolaryngol* 95:442-447, 1972.
13. Quick AJ: *The Hemorrhagic Diseases and the Pathology of Hemostasis*. Springfield, Ill, Charles C Thomas Publisher, 1974.
14. Sholenvar J, Hunsicker RC: Arteriography in posttonsillectomy hemorrhage. *Arch Otolaryngol* 95:581-583, 1972.
15. Grisel P: Eucleation de l'atlas et torticollis naso-pharyngien. *Presse Medicale* 38:50, 1930.
16. Alexander DW, Graff TD, Kelley E: Factors in tonsillectomy mortality. *Arch Otolaryngol* 82:409-411, 1965.
17. Pratt LW, Gallagher BA: Tonsillectomy and adenoidectomy, incidence and mortality. *Otolaryngol Head Neck Surg* 87:159-166, March-April 1979.

Recurrent Inflammatory Skin Lesions Complicating Jejunioileal Bypass

M.H.A. QURESHI, M.D.

Introduction

Most obese patients after intestinal bypass surgery, whether jejunocolostomy or jejunioileostomy, tend to develop varieties of intestinal and nonintestinal complications, mostly due to malabsorption, depletion of nutrients, and/or altered immune response.

We report two patients with jejunioileostomy for morbid obesity. One patient needed restoration of intestinal continuity (reversal) purely because of recurrent inflammatory skin lesions and transient arthralgia as an unusual complication of the jejunioileal bypass. The second required dismantling of jejunioileostomy because of progressive liver function abnormality, malnutrition, and progressive worsening of skin lesions. This patient has had massive weight gain within a year after restoration of intestinal continuity, requiring gastric stapling.

Reports of Cases

Case 1. A 31-year-old white male police officer underwent jejunioileal bypass on Nov. 14, 1975 for excessive weight of 290 to 300 lb. His height was 6 ft 3 in. His complaints were increasing weight gain, shortness of breath most of the time, and severe anal attacks twice during the past two years with angiogram showing partial blockage of the left anterior descending coronary artery proximally. He has also had left lower extremity venous ligation and stripping, including skin graft, for varicose vein ulcer in 1968, peptic ulcer disease for four years, and condyloma acuminatum of penile foreskin. He had a family history of coronary artery disease and hypertension. His only clinical abnormality was obesity. His hematocrit was 45%, and liver and thyroid function tests were normal. Triglycerides were 700 mg/dl. IVP and GI series were normal except for a small hiatus hernia. Postoperatively the patient had diarrhea

controlled with diphenoxylate hydrochloride with atropine sulfate (Lomotil); later on his bowel movements consisted of two to three bowel movements without oil. He lost 118 lb in nine months and for the last three years maintained the same weight of about 175 lb.

Three years later, in November 1978, he was seen with swelling of both legs, with severe pain and tenderness and localized increase in temperature in both ankles, feet, and the right calf. Two days later he had severe left-sided chest pain and high temperature of 103 F, with difficulty in breathing but without sweating or radiation of pain, for which he was admitted. Examination of the cardiovascular system and chest showed no abnormality, and there was no hepatomegaly. There was swelling of both ankles, feet, and the lower third of the legs, with erythema and localized increase in temperature, pain, and tenderness. EKG and x-ray of the ankles, tibia, and fibula were normal. Hemoglobin was 13.1 gm/dl, total protein 6.2 gm/dl, albumin 4.0 gm/dl, and alkaline phosphatase was normal. The lung scan was normal. He was treated with analgesics (indomethacin [Indocin]) and antibiotics (penicillin) with excellent response.

In January 1979, one and one half months after the episode, he was admitted with severe abdominal pain, nausea, and profuse vomiting. Physical examination showed mild dehydration, and extreme epigastric and right upper quadrant tenderness. Investigations revealed acute pancreatitis and cholelithiasis, with high urine serum amylase level, and high SGOT, LDH, and alkaline phosphatase. When cholecystogram showed several small stones, cholecystectomy was done on Jan. 15, 1979.

On April 16, 1979, three months after the acute pancreatitis, the patient, now 35 years old, developed severe pain in both feet and ankles and both knee joints, more on the left side, with extreme difficulty in walking. The pain and swelling of the legs, tenderness with extreme erythema, localized increased temperature in both feet, ankles, legs, and somewhat in the knee joints, simulated cellulitis clinically. He has had similar episodes four times in the past five months, with red, painful swelling of both feet and ankles associated with high fever, responding very well to indomethacin and penicillin. The radiographic findings have been negative. The sedimentation rate was 18%. Joint aspiration showed no bacterial organisms and no crystals, and the WBC count was not excessively high. Total protein was 5.5 gm/dl, which is slightly low, and calcium 8.3 mg/dl,

Reprint requests to P.O. Box 690, 694 W. Main St., Hendersonville, TN 37075 (Dr. Qureshi).

also slightly low. Rheumatoid factor was negative, and ASO titer 12 Todd units. Treatment with rest, analgesics, penicillin IM, and diphenhydramine hydrochloride (Benadryl) gave a good response.

A month later, he was readmitted with recurrent cellulitis-like inflammation of the ankles and lower legs along with arthralgia of both knees and multiple small abscesses over the lower extremities. These were papular lesions which contained purulent materials. There were also some erythema nodosum-like nodules over both tibial shafts with pain, swelling, tenderness, erythema, localized increased temperature, and limited mobility of the joints of both legs. Liver function tests were normal except for slight increase of gamma GT; hemoglobin and protein immunoelectrophoresis pattern were normal.

Treatment initially was started with antibiotics as small doses of penicillin with good response, but because of the incapacitating recurrent cutaneous inflammation with arthralgia, it was decided to dismantle the jejunoileal bypass. This was carried out with excellent response, and the patient has since had no recurrence of the cutaneous inflammation or arthralgia. He went to work as a police officer again after two months.

Case 2. A 33-year-old white male salesman underwent jejunoileal bypass in July 1975 for morbid obesity of 430 lb. Postoperatively he did well and lost weight of 240 lb in one and one half to two years without any complications. In February 1977, he was admitted for generalized weakness and phlebitis, and in October 1977, he was admitted for generalized weakness, malnutrition, multiple boils, and superficial skin lesions on the lower extremities up to the waist, with a few also over the trunk. There was no arthralgia or arthritis. Extensive evaluation of these skin lesions included biopsy and multiple culture, none of which has been conclusive except for secondary infection with staphylococcus. Total protein was 5.2 gm/dl, with albumin 2.4 gm/dl, and cholesterol was 85 mg/dl. Liver function tests were normal, BUN 5 mg/dl, and uric acid 6.9 mg/dl. Liver scan showed slight mottling, with possible early hepatocellular disease; there was no uptake of isotope in the bones; spleen was normal.

The patient had three to four loose stools with oil, and was placed on cholestyramine (Questran) and diphenoxylate hydrochloride with atropine sulfate with good response. His weight was maintained at 200 lb. There was no history of hepatitis or alcohol intake.

In December 1978, approximately three years after his operation, he was admitted because of progressive weakness, weight loss of 20 lb, and multiple skin lesions on the legs up to the waist. They had become worse in the last three weeks, he looked chronically ill, emaciated, and looked anemic, but without jaundice, spider angiomas, or gynecomastia. There was slight pitting edema of the legs, which showed multiple raised papular lesions with erythema at the edges and which seemed to be filled with purulent material. Albumin was 2.6 gm/dl, total protein 5.6 gm/dl, cholesterol 70 mg/dl, hematocrit 29% with mean corpuscular volume of 100, folate level 9.1 ng/dl, serum iron 58 μ g/dl, and total iron binding capacity 102 mg/dl. Protein electrophoresis showed low total protein with broad base elevation of gamma globulin. Lung scan was abnormal, with areas of diminished isotope localization, and now with shunting of isotope to the bone marrow. Liver biopsy showed fatty infiltration with mild portal fibrosis and slight cholestasis.

In February 1979, because of progressive downhill general condition, and no apparent improvement of his nutritional status, with progressive liver function abnormality, worsening of skin lesions of the extremities, and multiple perineal and perirectal abscesses and persistent anemia, the jejunoileal bypass was dismantled and a liver biopsy was taken. His postoperative course was uneventful and he was discharged about 12 days after the operation. His general condition was excellent and his skin lesions had disappeared.

In February 1980, he was admitted again for morbid obesity, current weight being 368 lb, making him unable to walk; he had a compression fracture of the lumbar spine, which caused severe back pain. Gastric stapling was done after possible complications were discussed with the patient.

Discussion

Intestinal bypass surgery for treating massive obesity was introduced in 1956. Its complications have been described as gastrointestinal, with severe diarrhea, steatorrhea, cholelithiasis, progressive liver disease to hepatic failure, intestinal pseudo-obstruction, gastric ulcer, and bypass-enteropathy; metabolic, with dehydration; electrolyte deficiency, such as hypokalemia, hyponatremia, hypocalcemia, hypomagnesemia, and deficiencies of vitamin A, D, K, C, folic acid, vitamin B₁₂, magnesium, and hypoproteinemia and metabolic bone disease; renal complications, with oxalate stone (nephrolithiasis and nephrocalcinosis), immune nephropathy, and progressive renal failure; and miscellaneous complications, such as polyarthritides simulating rheumatoid-like arthropathy, alopecia, tuberculosis, adverse psychological reaction, orthostatic hypotension, tetany, and anemia. The electrolyte deficiencies and malabsorption syndrome with hypoproteinemia and different vitamin deficiency states with consequent metabolic bone disease are inevitable complications of bypass surgery in the course of time. The polyarthralgia and polyarthritides, resembling rheumatoid arthritis, from intestinal bypass surgery, have been reported to occur in about 25% to 30% of the patients.¹

The skin lesions have not been well documented in American journals; four patients with skin lesions were described by Drenick et al.² Our two patients had recurrent inflammatory skin lesions. One showed inflammatory skin lesions of the lower extremities simulating cellulitis clinically three years after the jejunoileostomy, with five similar subsequent episodes, which always responded very well to antibiotics

and analgesics. Only restoration of the intestinal continuity was needed to prevent this incapacitating recurrent inflammatory skin lesion. Notably, this patient did not have any gross liver abnormality or any malabsorption deficiency state. The second patient had dismantling of jejunoileostomy for progressive worsening of the skin lesions and progressive deterioration of the liver function and malnutrition. Complement studies, circulating immune complex study, and tissue typing were not sought in either case.³

The skin lesions associated with various enteric diseases, such as ulcerative colitis, granulomatous colitis, Whipple's disease, and Behcet's disease are well known, as are polyarthritides and arthralgia. The skin lesions following intestinal bypass surgery could possibly be due to zinc deficiency, since zinc is absorbed from the jejunum. Signs and symptoms of zinc deficiency are diarrhea and skin lesions such as orofacial eczematous eruptions, small vesicles, pustules, erosions, and alopecia.

Zinc deficiency results from the short bowel syndrome, chronic alcoholism, total parenteral hyperalimentation, and hereditary causes (acrodermatitis enteropathica). It has been suggested that the jejunal Paneth cells play a role in zinc metabolism.

The pathogenesis of the inflammatory skin lesions following intestinal bypass surgery is largely unknown. Various hypotheses are altered immune response, intestinal stasis, malabsorption, altered bile salt metabolism, and various deficiencies, especially zinc deficiency, which may play a role in the pathogenesis of skin lesions following intestinal bypass surgery. This needs to be further investigated.

REFERENCES

1. Rose E, Espinoza LR, Osterland CK: Intestinal bypass arthritis. *J Rheumatol* 4:129-134, 1977.
2. Drenick EJ, Ament ME, Finegold SM, et al: Bypass enteropathy. *Am J Clin Nutr* 30:76-89, Jan 1977.
3. Wands JR, LaMont JT, Mann E, et al: Arthritis associated with intestinal-bypass procedure for morbid obesity. *N Engl J Med* 294:121-124, 1976.

APRIL 1982						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
			TMA 147th ANNUAL MEETING Hyatt Regency Hotel — Memphis			
18	19	20	21	22	23	24
25	26	27	28	29	30	

Unusual Presentation of North American Blastomycosis

WILLIAM B. HARWELL, M.D.

Introduction

In the midsouth, North American blastomycosis is a relatively common clinical entity resulting from infection by *Blastomyces dermatitidis*. The lungs are the primary target organ but the skin is often involved and frequently presents the initial symptoms. The cutaneous lesions are either secondary to systemic dissemination or, much more rarely, due to primary inoculation. The usual appearance of the secondary cutaneous lesion is that of an ulcer with advancing, heaped up borders and a healing atrophic center.¹ The primary inoculation form is characteristically a chancre-like lesion with regional adenopathy.^{2,3} Our otherwise asymptomatic patient with cutaneous North American blastomycosis occurring in a dermatomal pattern illustrates one of the unusual forms of North American blastomycosis that may occur.

Report of a Case

This 35-year-old white male farmer from southern Middle Tennessee had a linear group of verrucous lesions on the right chest wall (Fig. 1). They extended in a band from the center of the back to the right anterior axillary line, corresponding to the T6 to T8 dermatomes.

He had first noticed a small wart-like lesion slightly to the right of the vertebral column approximately three months previously. He related the onset to a time when he worked in a dusty hay field, recalling frequently rubbing his back across the seat of his truck and scratching skin on an exposed spring during this time to relieve itching.

His review of symptoms was noncontributory. He specifically denied symptoms related to those organ systems which often show involvement with North American blastomycosis, including the genitourinary, osseous, and respiratory systems.

Reprint requests to 1905 Hayes St., Nashville, TN 37203 (Dr. Harwell).



Figure 1. Verrucous lesions in a linear pattern.

He felt himself to be in good health, without any complaints except the unattractive appearance of the warty lesions on his chest. A physical examination was unremarkable except for the described lesions. Chest x-ray and bone scan were normal.

A biopsy of one of the nodular lesions on the back was bisected and one half submitted for histologic examination; the other half was submitted for fungal culture.

Histologic examination revealed pseudoepitheliomatous epithelial hyperplasia and a marked granulomatous inflammation within the dermal connective tissue. Numerous giant cells were identified. Special stains demonstrated large doubly contoured focally budding yeast forms morphologically compatible with *Blastomyces dermatitidis*, and *Blastomyces dermatitidis* was recovered by culture.

The patient is now undergoing therapy with ketoconazole.

Discussion

This patient demonstrates some of the typical epidemiological features of North American blastomycosis. The disease occurs commonly in farmers and laborers, and is approximately nine times more commonly seen in men than women.⁴ Although pulmonary involvement occurs in virtually all patients with North American blastomycosis and the genitourinary and osseous systems are frequently involved,⁵ this patient had no detectable internal organ involvement by either physical or laboratory examination. When there is a linear distribution of cutaneous lesions, which may be seen in either the primary inoculation form or the form due to secondary dissemination, the distribution usually follows the main lymphatic drainage. The zosteriform pattern seen in this patient was distinctly unusual.

Since Tennessee does not require the reporting of North American blastomycosis to the Public Health Department, good information regarding frequency of the infection is lacking. Nevertheless, North American blastomycosis does occur relatively commonly in the Mississippi Valley, and deep fungal infections should be considered in the differential diagnosis of verrucous, ulcerated skin lesions.

REFERENCES

1. Rook A, Wilkerson DS, Ebling FJG: *Textbook of Dermatology*, ed 2. Oxford, Blackwell Scientific Publications, 1972, pp 780-782.
2. Landay ME, Schwarz J: Primary cutaneous blastomycosis. *Arch Derm* 104:408-411, 1971.
3. Larsh HW, Schwarz J: Accidental inoculation blastomycosis. *Cutis* 19:334-337, 1977.
4. Furculow ML, Chick EW, Busey JF, et al: Prevalence and incidence studies of human and canine blastomycosis. *Amer Rev Respir Dis* 102:60, 1970.
5. Sarosi GA, Danes SF: Blastomycosis. *Am Rev Respir Dis* 120:911-938, 1979.

SUPPORT YOUR ADVERTISERS

Many of the advertisers in this Journal are long-standing patrons of our monthly publication. Their products and services are of the highest quality available. Don't take them for granted. Read their ads!

Now Available!

History of the Tennessee Medical Association 1930-1980



Written By
R. H. Kampmeier, M.D.

Order Now
Price . . . \$25.00

Tennessee Medical Association
112 Louise Avenue
Nashville, Tennessee 37203

Please send me ____ copy(ies) of the *History of the Tennessee Medical Association 1930-1980*. Price: \$25.00 per copy. Enclosed is my check (payable to TMA) for \$_____.

Name _____

Address _____

City/State/Zip _____

Medical Ethics: "Zebras" vs. "Horses"

GLENN C. GRABER, Ph.D. and JOHN A. EADDY, M.D.

Historically, the term "ethical" has been used in opinions of the Judicial Council and in resolutions adopted by the House of Delegates to refer to matters involving (1) moral principles or practices; (2) customs and usages of the medical profession; and (3) matters of policy not necessarily involving issues of morality in the practice of medicine. The term "unethical" has been used to refer to conduct which fails to conform to the professional standards, customs and usages, or policies.¹ (§1.01)

Discussions of medical ethics within the profession have generally focused on the second and third of these categories. The *Current Opinions* booklet itself¹ bears this out, for the majority of the topics it deals with fall into these two categories.

The importance of these matters should not, of course, be underestimated. Indeed, most if not all of them are fairly directly related to moral principles, values, or duties (and thus the distinction between the three categories listed are not as firm as one might suppose at first glance). For example, the protocols for communication between the physician in charge of a case and the consultants to whom he refers the patient (as set out in *Current Opinions*¹(§8.03)) are in themselves matters of custom, but these customs have obvious and significant consequences for the quality of patient care (which is clearly a moral issue). Inadequate communication could lead to discontinuity of care, needless duplication of potentially hazardous diagnostic procedures, and even serious deficiencies in the care provided to the patient.

When issues in category 1 are discussed, attention generally focuses on the ethical "zebras"—that is, on rare, exotic and momentous cases of a sort that occur only in the context

of secondary and tertiary care and/or academic and research medicine. The *Current Opinions* booklet also bears this out. The 12 subsections in the chapter entitled "Opinions on Social Policy Issues" (which is where most of the explicitly ethical issues are to be found) include such "zebras" as: "Artificial Insemination"¹(§2.03); "Artificial Insemination: *In Vitro* Fertilization and Embryo Transplantation"¹(§2.04); "Fetal Research Guidelines"¹(§2.07); "Genetic Engineering"¹(§2.08); "Organ Transplantation Guidelines"¹(§2.09); "Quality of Life"¹(§2.10); and "Terminal Illness."¹(§2.11)

Here again, we do not question the importance of attention to these matters. In vitro fertilization or genetic engineering may not be elements of everyday medical practice, but they are sufficiently momentous when they do occur to call for extensive and open discussion within the profession of their ethical implications. The issue of the appropriate limits to aggressive treatment for defective infants¹(§2.10) or terminally ill patients¹(§2.11) comes up much more frequently and commonly in clinical practice, and thus it is even more important that these issues be thoroughly aired in professional discussions.

The point we wish to make here is simply that issues of these kinds do not *exhaust* the domain of medical ethics. There are numerous ethical "horses" that require careful ethical analysis for every ethical "zebra" that has received attention. Indeed, we are in agreement with Dr. Eric Cassell when he says: "I believe that medicine is inherently a moral profession—or a moral-technical profession, if you wish . . . because it has directly to do with the welfare and the good of others."²(p87) Cassell adds: "Perhaps that would not be so if in each case there was only one right decision or only one correct course of action, but in medicine there are frequently several possible courses of action, each of which is technically correct. Or there may be only one technically proper decision but several different ways of implementing it, each of which would

From the Department of Philosophy, University of Tennessee (Dr. Graber) and the Department of Family Practice, University of Tennessee Center for the Health Sciences (Dr. Eaddy), Knoxville.

Reprint requests to Department of Philosophy, University of Tennessee, Knoxville, TN 37916 (Dr. Graber).

affect the life of the patient somewhat differently.”^{2(p109)}

Thus, for example, in dealing with terminally ill patients there is not only the momentous issue of setting the final limits to life-prolonging treatment, but a host of equally significant but less dramatic issues along the way. To indicate but a few of these: precisely when and how to tell the patient the diagnosis of terminal illness; whether to inform family members and/or extremely close friends first, and enlist them to help the patient cope with the news, or whether, on the other hand, to inform the patient first and consult with him about informing family and friends; what range of treatment options to present to the patient and when and how to conduct this discussion—whether, for example, to initiate it when family members are present or when the patient is alone; whether to bring up the possibility of no treatment; whether the physician has a role in resolving the family wrangles that often go on outside the patient’s door and which may affect the state of mind of the patient; whether, when, and how often to waive hospital regulations about the number and age-minimum of visitors allowed to be with the patient.

These are not life-or-death decisions, but they are significant ethical issues which may make a big difference to the welfare and personal values of the patient. For example, if the patient is the mainstay of the family, the one to whom other family members customarily look for guidance and emotional support, then it may be both a strategic error and an injustice to first inform the family of the patient’s terminal condition and to expect them to assist in breaking the news to the patient.

Thus, “Medicine is intrinsically a moral activity because all its many functions converge upon one end: making a decision for a particular person who presents himself in need, as a *patient*, someone bearing distress or disease. Everything the physician does, all his skill and knowledge, must focus on a choice of which of the many possible actions should be taken for this patient. What is the right decision, the one which is good for this patient—not patients in general, not what is good for the physician, for the science of medicine, or even for society as a whole.”³

In justice to the *Current Opinions* booklet which we quoted earlier, we must acknowledge that it does not ignore issues of these sorts. Sections dealing with topics we would classify here include: “Informed Consent”^{1(§8.07)}; “Patient In-

formation”^{1(§8.11)}; “Free Choice”^{1(§9.05)}; and “Allocation of Health Resources.”^{1(§2.02)} Still, a great deal remains to be done in exploring issues of this sort. They need to receive the same sort of careful, sustained and wide-ranging discussion that has been given to the ethical “zebras” and issues involving professional customs.

In a unique program of which we are a part, the University of Tennessee is addressing the full range of ethical issues in health care. Philosophers and other humanities scholars work cooperatively with physician-educators in joint research projects on these topics, as well as in teaching activities designed to guide students in the health professions to incorporate the analysis of ethical issues into their clinical reasoning. Four full-time faculty members at UT Center for the Health Sciences in Memphis and a half-dozen part-time faculty members of the Department of Philosophy, as well as scholars from religious studies, sociology and other fields at UT Knoxville, offer courses, workshops, and grand rounds sessions for these students at all levels of training. We also offer a program of graduate study for humanities students, training them to conduct similar activities at other institutions.

As a part of the UT Inter-Campus Graduate Program in Medical Ethics, we have developed a series of case studies dealing with ethical issues in primary care. Examples of everyday cases in the set include:

- Limits of *Medical Responsibility*
- Privacy of Teen-Age Sexuality
- Decisions Made *for* Patients
- Patient Noncompliance in Arranging Payment
- Suspected Sexual Abuse by a Parent
- V.D. — “Don’t Tell my Spouse”
- Confidentiality and the Person Who Pays the Bill
- Malpractice Review and Conflict of Interest

We would be pleased to send a set of these case studies to anyone who is interested in them.



Acknowledgment:

The University of Tennessee Inter-Campus Graduate Program in Medical Ethics is supported by Program Implementation Grant #ED-32672-78-652 (1978-83) from the National Endowment for the Humanities.

REFERENCES

1. American Medical Association: *Current Opinions of the Judicial Council of the American Medical Association*. Chicago, American Medical Association, 1981.
2. Cassell EJ: *The Healer’s Art: A New Approach to the Doctor-Patient Relationship*. Philadelphia, J.B. Lippincott Co, 1976.
3. Pellegrino EP, Thomasma DC: *A Philosophical Basis of Medical Practice*. New York, Oxford Press, 1981, pp 224-225.

CEA as a Cancer Marker

Introduction

Human neoplasms may produce and release into the circulation a variety of substances collectively referred to as *tumor markers*. The oncofetal antigens comprise one particular group of markers, of which the carcinoembryonic antigen (CEA) has been the most widely studied.

CEA is a glycoprotein of about 200,000 molecular size. It is expressed in significant amounts during embryonic life, especially by the large intestine, and postnatally by carcinomas arising from this site. CEA can be released by these tumors into the circulation to cause raised levels which may be measured by sensitive radioimmunoassay and related techniques. Such methods have, however, demonstrated that small amounts of CEA are also present in the normal adult large intestine and in the circulation of healthy subjects.

Subsequent investigations have revealed that many epithelial-derived tumors at other sites may also express CEA and be associated with elevated circulating blood levels. Thus, it may be that the assay of plasma CEA has protean applications in oncology.

Plasma CEA Levels in Health and Disease

Using the presently available radioimmunoassay, 2.5 ng/ml is stated to be the upper limit of normal for plasma CEA levels. Values in excess of 2.5 ng/ml may be found in association with cancers, in particular those of the gastrointestinal tract, pancreas, ovary, lung, and breast. Similarly raised CEA levels may, however, be detected in cigarette smokers, in patients with benign neoplasms, and in 15% to 20% of subjects with inflammatory disorders such as ulcerative colitis, Crohn's disease, pancreatitis, liver disease, and pulmonary infections. Thus, raised plasma CEA values are not specific for cancer, although very high levels (e.g., above 20 ng/ml) are highly suggestive of malignancy. It is important that serial assays of CEA be used in reaching a clinical judgment, and not any single determination. The panel believes that each

laboratory performing CEA assays should establish its own "normal" range. The recommended upper level of "normal" (2.5 ng/ml) in the population requires additional evaluation. Values cited in this document are based on the only radioimmunoassay commercially available at the time of the conference, the Hoffman-La Roche assay. Other assay systems may give different results.

Conclusions and Recommendations

After listening to and discussing the evidence, the panel reached the following conclusions:

Should CEA Be Used in Cancer Screening?

As indicated above, studies to date have revealed a major overlap in the distribution of plasma CEA values in subjects with inflammatory diseases and benign and malignant tumors of the gastrointestinal tract and of other sites, including breast, bronchus, urothelium, ovary, uterus, and cervix. Therefore, the plasma CEA assay does not possess the sensitivity (true-positive rate) or the specificity (true-negative rate) required to discriminate between localized malignant tumors and benign disorders.

Consequently, these data, together with the fact that raised CEA levels occur in smokers, vitiate the use of plasma CEA assays in the screening of an asymptomatic population to detect neoplastic disease. The use of CEA to assist with the surveillance of so-called high-risk groups, in whom CEA-producing tumors may develop, remains to be established.

Is CEA Helpful in Cancer Diagnosis?

Few prospective studies have been effected with the aim of determining whether the availability to clinicians of a plasma CEA result would help in confirming a suspected malignancy in symptomatic patients. In addition, the caveats with respect to cancer specificity which limit the CEA test's applicability for screening (namely, that raised levels occur with smoking, non-neoplastic diseases, and benign tumors) are also pertinent with respect to assisting in reaching a diagnosis in a symptomatic population.

Therefore, we cannot recommend, based on the presently available data, that CEA be used independently to establish a diagnosis of cancer. However, in a patient with symptoms, a grossly elevated value, greater than 5-10 times the upper limit of the reference normal range for that particular laboratory, should be

A Consensus Development Conference was held at the National Institutes of Health on Sept. 29-Oct. 1, 1980, to address issues concerning the role of the carcinoembryonic antigen (CEA) as a marker in the management of cancer.

This conference was sponsored by the National Cancer Institute, assisted by the Office of Medical Applications of Research, Office of the Director, NIH.

considered strongly suggestive for the presence of cancer in that particular patient. In this situation further diagnostic efforts to establish the presence or absence of cancer are indicated.

What Does CEA Tell About the Extent and Outcome of Cancer?

Many workers have shown that preoperative plasma CEA levels correlate with the clinical stage of disease in several tumor types. Patients with colorectal or, possibly, bronchial carcinomas whose preoperative CEA levels are at the lower end of the spectrum have better survival rates than patients whose levels are in excess of 10 ng/ml.

It should be remembered, moreover, that the correlation between increasing plasma CEA levels and progressive cancer is not always perfect and that a normal CEA cannot be taken as evidence of localized disease or remission. About 15% to 20% of patients with proved malignancies never have elevated plasma levels. Such false-negatives may be related to the degree of tumor differentiation. Poorly differentiated colorectal carcinomas, for example, tend to be associated with a reduced proclivity for CEA expression and release.

On the basis of the available data, we recommend that a preoperative plasma CEA value be obtained in patients with either colorectal or bronchial carcinomas and be used as an adjunct to clinical and pathological staging methods.

Is CEA Helpful in Monitoring Cancer Treatment?

The regular and sequential assay of plasma CEA is the best presently available noninvasive technique for postoperative surveillance of patients to detect disseminated recurrence of colorectal cancer. As a monitor of colorectal cancer, CEA has been found to be elevated when residual disease is present or is clinically progressing. Following complete surgical removal of a colorectal malignancy, an elevated plasma CEA value should usually return to normal by six weeks. The failure to observe a reduction of a previously elevated preoperative CEA titer strongly indicates the presence of residual tumor. It is also possible to demonstrate in a substantial number of patients that CEA becomes significantly elevated before metastatic disease can be detected by clinical or other diagnostic measures. This information can be best achieved by obtaining plasma samples for CEA assay preoperatively, four to six weeks postoperatively, and thereafter at regular intervals as an integral component of overall patient follow-up. While slowly rising levels may be more indicative of local recurrence, rapidly rising values reaching very high levels, usually in excess of 20 ng/ml, are found most often with hepatic and osseous metastases.

For patients with metastatic tumor, the CEA assay may complement standard clinical measurements of tumor response to therapy. However, as in the case of

other clinical laboratory tests, there are examples of discordance between the observed change in tumor mass and the corresponding CEA values. In patients with advanced unmeasurable tumor, especially colorectal carcinoma, CEA assays may offer the only index to measure changes in tumor burden. Although definite criteria to aid in deciding whether to continue or alter therapy in patients with unmeasurable tumor, based on serial CEA determinations, are not established, it appears that a steadily, markedly rising titer is indicative of a poor therapeutic response. In such circumstances, each physician should make an individual decision whether CEA monitoring will be of clinical value in the management of a particular patient.

It is important to remember that raised values, due to various causes such as smoking, intercurrent infection, etc., can be seen in patients where the tumor is clinically stable and that decreasing CEA values are not invariably a sign of successful therapy. Furthermore, a proportion of patients with recurrent or advanced colorectal cancer may not show elevated plasma CEA values.

The role of CEA in the postoperative and therapeutic monitoring of patients with other types of cancer, such as pancreatic, gastric, and gynecological neoplasms, is less convincing than it is for colorectal cancer. In patients with metastatic breast cancer or lung cancer, especially small cell carcinoma, and significant CEA elevations, changes in CEA titers may be of value in reflecting response to chemotherapy. More studies are required to evaluate the role of CEA determinations for initiating or changing therapy in tumor types other than colorectal cancer.

The panel would like to stress the view that the clinical utility of a tumor marker may be related to the efficacy of a therapeutic regimen. Where earlier recognition of disease progression is not accompanied by appropriate therapy, no benefit is gained. On the other hand, as more successful treatments for the major tumor types become available, CEA and other tumor markers will be more useful in the management of cancer.

Additional Needs

The panel has identified several areas for future study which should improve the clinical utility of the CEA assay: the improvement of assay methodology; the evaluation of monoclonal antibodies to CEA for improving assay specificity; the establishment of a laboratory quality control system using a CEA standard preparation; the clinical study of CEA in combination with other markers; the diagnostic role of CEA in biological fluids other than plasma; the individual and collective comparison of CEA with other specific diagnostic modalities; the estimation of tumor CEA content in relation to plasma CEA values; and the study of the pathophysiology and metabolism of CEA.

AMA Statement on Voluntary Health Planning

Introduction

In response to the final directive of Substitute Resolution 66(I-80), the Council on Medical Service and its Ad Hoc Committee on Health Planning have developed a Statement and Principles of Voluntary Health Planning.

It is important to note that the call for voluntary, locally based health planning in the resolution contains no reference to inclusion of sanctions or regulatory authority. It is the opinion of the Council that such controls are coercive and detract from the effectiveness of planning at the local level. The Council's interpretation of the voluntary program envisioned by the resolution is that a cooperative planning effort at the community level would not require recourse to prohibitive sanctions to be effective. Rather the success of such a voluntary program would rest on the viability of the political process at the community level. The Council believes that the statement outlined should serve as a foundation for voluntary health planning with adaptation at the state and local levels as appropriate.

The American Medical Association has traditionally supported the concept of community based health planning as an important element in the efficient, effective delivery of high quality medical care to patients. It has been the position of the Association that the distribution of health resources must be a rational process in order that the availability and quality of care not be adversely affected by inappropriate decisions concerning the need for the services. In order to insure the availability of high quality medical care, any health planning program must incorporate sufficient flexibility to accommodate different medical needs of individual patients and to respond to various regional priorities. This flexibility can best be achieved by placing the planning authority and decision-making power at the local level. Further, to assure a rational process of health planning, those most directly involved in and knowledgeable about the use of medical services at the local level must share in the responsibility for making decisions regarding the quality, distribution and availability of services. Health planning can gain community accep-

tance and support in direct proportion to its use of the political process.

Despite the Association's advocacy of these concepts, federal authorities have not responded to effectively address and implement them in the current planning program. Since 1974, under P.L. 93-641 and P.L. 96-79, the health planning process has evolved into a system of regulatory cost controls with decreasing regard for local needs and priorities. As this evolution has occurred, decision-making authority has been progressively transferred from the local to the federal level, a transition not surprising inasmuch as the current program has received a majority of its financial support from the federal government. The result has been the development of a network of quasi-regulatory agencies more responsive to federal directives and concerns than to the health and medical needs of the communities intended to be served.

The AMA has worked to correct the inequities and inefficiencies of P.L. 93-641 and P.L. 96-79 since their enactment. These efforts have included development of amendments to modify the federal legislation, recommendations to improve federal implementing regulations and encouragement and technical support to physicians participating in this program. P.L. 93-641 and P.L. 96-79 purport to create a public forum in which a community may participate to identify and address local health needs and priorities. This concept depends greatly on the participation of community volunteers; however, the Council believes that a voluntary program presumes the absence of government interference. The adoption of Substitute Resolution 66, calling for the cessation of funding and repeal of the health planning laws, does not diminish the Association's support for the concept of community based health planning. Rather, this policy with its concomitant call for development of a voluntary, locally based planning system repudiates the current federally dominated program, which has not been and does not appear to have the potential to become effective in the distribution of health resources in the nation.

In response to this current policy directive, the Council on Medical Service has developed principles of voluntary health planning which appear in the following statement. It is the Council's belief that these principles, at a minimum, should be addressed by all communities that may choose to develop a commu-

This is Council on Medical Service Report A. Past House Action: I-80:240.

nity based health planning program. A variety of organizational structures and funding options are available to communities electing to develop and support a voluntary planning program. The Council believes that it should be the prerogative of each community to examine and select from among these various options according to its needs and its desire to institute such planning. Although there will be some variety in the outcomes of such voluntary programs, the Council believes this will properly reflect the varying priorities of individual communities. Accordingly, the Council on Medical Service *recommends* the adoption of the following statement and principles on voluntary health planning.

Basic Policy

One of the founding principles of the American Medical Association is "to promote . . . the betterment of public health." The AMA is committed, through a voluntary system, to seek improvements in the health care delivery system that will reduce or eliminate barriers to the provision of high quality medical and health services. A collaborative effort, at the community level, has the potential for improving the distribution and use of technology, reducing maldistribution and unnecessary duplication of facilities, services and personnel, and fostering development and use of resources in an orderly fashion. Coordination of various components in the delivery system should result in better continuity of care for the patient. It should also result in better utilization of manpower, facilities and other resources and should help lower the overall cost of health care.

"Planning" is simply defined as the process of thinking and developing an approach before actions are taken—not taking the action itself. As a preparatory activity for those responsible for taking action, "health planning" is a structure and process for determining, at the local level, what health services are wanted or needed and will be encouraged in each community. The purpose of community health planning is to improve the effectiveness and efficiency of the delivery system in order that services provided are available, accessible and acceptable to the community. The ultimate goal is the improvement of the physical and mental health of the people served.

Planning and providing appropriate health care services and facilities at the community level are not new to the medical profession. However, the shift in responsibility from those traditionally involved in the private sector to a governmentally designated public or quasi-public regulatory agency has distorted both the function and meaning of health planning. The regulatory approach to implementation of health planning objectives has not been generally acceptable to the public due to the coercive nature of such an approach. To be effective, the role and function of a health planning body must be clearly understood and accepted by the community served. The actions of

such a body, through a deliberative, consensus building process, must be satisfactory to both providers of health care and the recipients of such care.

An essential element in the acceptability of the actions of a community health planning body is the supportive participation of all segments of the community. It has been clearly shown that where physicians and other providers do not become actively involved in community health planning, other groups have assumed the leadership and attempted to determine the configuration of the health care delivery system in ways which may be disruptive. It is incumbent upon physicians to participate actively in a program of voluntary community health planning in accord with Article VII of the AMA Principles of Medical Ethics which states: "A physician shall recognize a responsibility to participate in activities contributing to an improved community."

Principles

The American Medical Association supports voluntary, community based health planning. Within this context, the term "voluntary" is used to describe a formalized activity originating from the expressed will of the community without statutory mandates. The term "health planning" is defined as a structured process of determining appropriate community health and medical needs and priorities and assisting in the development or allocation of resources to meet those needs within a given locale or region. As such, "health planning" should be the positive evolutionary development of community health resources with a focus of developing, improving and refining of services to the patient. The proper place for cost containment lies in increased attention to those services which increase the efficiency of health care delivery as well as those services which emphasize the prevention, early intervention, and treatment of poor health.

The AMA believes the following principles should be considered in the creation and implementation of a program of voluntary community health planning:

1. Health planning should be the primary function of a collaborative group of community organizations and interested individuals. While a variety of structural modalities may be considered to implement this function, the most common is the creation of an eleemosynary organization by the community to be served. However structured and financed, this "health planning organization" should be created from the mandate of the community to address health needs and priorities in a structured fashion and should be legally incorporated to perform this function.

2. The planning organization must be representative of the community and have the active support and participation of the community to be served, including but not limited to physicians. The proper mix of the participants should be determined by the community served and should be responsive to the priorities of the community.

3. As an entity representing the community-at-large, the planning organization should exhibit the following characteristics: thoroughness, objectivity, integrity, sensitivity to the interests of the community; understanding of health care delivery systems and financing; and accountability to the community served.

4. The planning organization should assume an active positive role in assessing community health and medical needs and should serve as the community's advocate in meeting those needs. The recommendations of the organization should be advisory and the responsibility for implementing those recommendations should rest with the institutions and entities most directly involved.

5. The organization should serve in an informational and educational role to the community-at-large on such issues as community health status, health care financing, health care costs and the availability of local health resources. Periodic reports should be provided to the community on these and other significant health care issues.

6. The size and scope of the geographic area to be served is best determined by the community residents based on analysis of such factors as population density, service area of health care institutions and practitioners, geographic and transportation considerations and should not be arbitrarily defined by existing political boundaries. Regional considerations involving two or more such local planning areas may best be coordinated through a consortium of the local planning organizations as appropriate.

7. The planning organization should function under a constitution and by-laws which, at a minimum, set forth: (a) the major objectives of the organization; (b) a locally accepted process for the election, selection and/or appointment of members to the governing body; (c) a mechanism to preserve accountability to the community-at-large for the recommendations and actions of the organization, recognizing the accepted principles of confidentiality; and (d) a mechanism for ongoing evaluation of all aspects of the organization's services to the community.

8. Decisions regarding the employment of professional consultants and/or staff are properly those of the governing body of the local organization based on

the scope of its activities and financial viability.

9. There should be a substantial commitment from the community-at-large to supporting and financing the operation of the planning organization. This commitment may be expressed through donations of public funds, private funds and general solicitation. Donations of time and expertise may be quite substantive and should be recognized equivalently as community contributions.

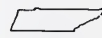
10. Government may provide supplemental funding in support of local health planning activities directed toward meeting locally determined goals and objectives. Such supplemental financial assistance from government sources should not diminish or replace the financial or other substantive support of the community. Such supplemental funding should not be accepted without careful consideration of the obligations which may accompany it and a commitment to achieve sufficiency as early as possible.

11. The planning organization should encourage and promote the development of positive incentives to attain the objectives identified by the community and should not have regulatory authority or responsibilities.

12. The protection of the public welfare is properly a concern of government and activities to protect the public may be implemented in a variety of ways. However, local voluntary health planning is a creative process, and therefore should not include the use of regulatory sanctions.

13. Exemption from the antitrust laws should be sought for actions taken to implement recommendations of the planning organization, in furtherance of the objectives identified and approved by the community through the planning process.

In conclusion the AMA supports the concept of voluntary, locally based health planning as an important element in the efficient, effective delivery of high quality medical care to patients. The Council on Medical Service and its Ad Hoc Committee on Health Planning strongly encourage medical societies, at the state and local level, to use these voluntary principles when initiating or participating in the development of health planning programs at the community level.

The Council on Medical Service *recommends* that this report be adopted. 

TENNESSEE MEDICAL ASSOCIATION

147th ANNUAL MEETING

April 14-17, 1982

Hyatt Regency Hotel, Memphis, Tennessee

Initiation of Voluntary, Locally Based Health Planning

The Council and its Ad Hoc Committee strongly believe that each community in cooperation with the local medical society should make its own decision as to whether a voluntary health planning program should be instituted. In an effort to assist those that do elect to develop programs of voluntary health planning, the following information has been prepared to provide suggestions as to (a) functions of a voluntary community-based health planning organization; (b) the medical society's role in voluntary health planning; (c) evaluation of the health planning program; and (d) options for funding a voluntary, community-based health planning effort.

Functions of a Voluntary Community-Based Health Planning Organization

The primary responsibility of a health planning organization is the provision of effective, efficient planning services to the community or region served for purposes of (a) assisting in the improvement of the health status of residents of the area; (b) providing assistance and support to health care institutions and entities in developing the appropriate mix of health care services; (c) promoting the quality, availability, accessibility, and continuity of health care services at a cost consistent with these requirements; (d) identifying unnecessary duplication of health services.

It is anticipated that, to fulfill these purposes, the activities of the organization could include the following:

1. Assembling and analyzing data concerning (a) the number, type and location of the community's health resources including services, facilities and manpower; (b) patterns of utilization of health care services and resources; (c) the general health status of area residents. Data acquisition should be directed toward existing resources whenever possible, and voluntary groups are encouraged to develop a regional data gathering process when needed. All data acquisition and release must respect patient and physician confidentiality requirements.

2. Identifying community health and medical needs and developing an overall health plan, with priorities, to meet these needs. This community plan should be

accompanied by a statement of specific objectives with a timetable for implementation acceptable to those institutions and entities directly affected.

3. Serving as a technical resource to the health care segment of the community by (a) providing data to assist internal institutional planning activities; (b) assisting in the development and promotion of health education and preventive health programs for the general public by various voluntary community agencies; (c) assisting, upon request, in the preparation of various public and private grant proposals in support of projects consistent with the objectives of the organization.

4. Serving as an advocate for the community whenever legislative or regulatory approval may be required to achieve objectives consistent with the overall health plan approved by the community.

5. Providing a forum for discussion of pertinent health issues at a community level and serving as a coordinator for change in addressing these issues.

The Medical Society Role in Voluntary Health Planning

The medical society, at the state and local level, represents physicians regardless of practice setting or institutional affiliation. As medicine's representative in the community, the medical society is dedicated to the maintenance and promotion of good health. One means to achieve this goal is to support, and participate in, the orderly development of adequate health resources to meet the needs of the community. The medical society has a special obligation to its membership and to the community-at-large to provide leadership and support of programs of voluntary community health planning so as to ensure that goals of maintaining and improving the quality, efficiency, availability, accessibility and cost effectiveness of the health care delivery system are met.

As an organization knowledgeable about health and medical services, the medical society is in a unique position to encourage and support the development of a program of community health planning. The medical society should: (1) Initiate or participate actively in formulating the purposes and objectives of the health planning organization. (2) Encourage total community support and participation in voluntary health planning. (3) Serve as a medical advisory group to the planning organization in the development of a medi-

This is Council on Medical Service Report B. Past House Action: I-80:240.

cally sound and ethically acceptable program that will meet community needs in a coordinated and efficient manner. (4) Seek fair representation for physicians on the policy-making body of the planning organization, appoint such physician representatives and encourage the participation of physicians in the activities of the organization.

Evaluation of Health Planning

A voluntary community health planning program must be evaluated on the basis of its effectiveness in identifying and reaching community needs and priorities. There should be periodic reevaluation of these needs and priorities with assessments of actual accomplishments.

The planning organization should also be evaluated in terms of its effectiveness in assisting providers of health care to develop their own internal planning processes, in stimulating the active participation of all segments of the community in the planning organization's program and the acceptability of that program to the community. The overall health planning program should be judged ultimately as to its success in achieving orderly coordination of existing facilities and services and the development of needed new resources to meet community needs and priorities.

Funding Options

All funding for health planning will ultimately come from the public, although the funding channel may vary. It may be the health care sector, non-health care private sector, or government. This is appropriate because the public is the ultimate beneficiary of a sound health planning program. It is anticipated that a major portion of the funding for a voluntary planning organization will be derived from the community served. This should not preclude the community, however, from selecting an appropriate mix of fund-

ing options to support the activities of a local community health planning program. A range of funding options might include:

- 1. Private funding — health care sector
 - (a) health care institutions
 - (b) third party payors
 - (c) professional associations
- 2. Private funding
 - (a) community solicitation
 - (b) local business and industry
 - (c) labor organizations
 - (d) private foundations
- 3. Public funding
 - (a) provision of block grants or categorical planning funds to states by the federal government to be allocated to local organizations as start up funds. Such funding should be coupled with a firm requirement for financial self-sufficiency by the local organization within a specified period. The administration of such funding should not be commingled with the administration of funds for patient care services.
 - (b) creation of an independent commission or corporation by state government with responsibility for disbursement of funds from a central health planning pool to local organizations. The central funding pool could be derived from imposition of a state fee for performance of such regulatory reviews as may be required by the state, i.e., capital expenditure reviews; an assessment of third party insurance carriers on an equitable basis (including intermediaries for Medicare/Medicaid programs); and direct contributions from state government.
 - (c) funds provided for purposes of health planning by units of local government.

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

Myocardial Infarction of Nonatheromatous Origin

CHARLES E. KOSSMANN, M.D., Editor

JON MANN, M.D.:

A 30-year-old black man presented initially to the emergency room complaining of acute onset at rest of left parasternal tightness radiating to both arms and associated with nausea, vomiting, diaphoresis, shortness of breath, and a feeling of impending doom. These symptoms lasted for approximately three hours. There had been no previous chest pain at rest or on exertion, and no evidence of impaired cardiac reserve.

A perforated peptic ulcer was repaired in 1975, when a grade IV/VI systolic mitral regurgitant murmur was heard and ascribed to healed rheumatic mitral valvulitis. He had taken heroin intravenously in the past but not since 1975. From 1975 to 1981 he had recurrent arthralgias, and in the three weeks before admission painful knees were treated with indomethacin and acetaminophen.

His father had hypertension and myocardial infarction; his mother had diabetes.

The rectal temperature was 99.3 F, pulse rate 100 beats per minute, respirations 20/min, and blood pressure 130/80 mm Hg. He was tall (height 78 in. with arm span of 83 in.) and thin but well developed and nourished and in no acute distress. There were bilateral retinal hemorrhages with exudates, Roth spots on the right, and bilateral conjunctival hemorrhages. A high arched palate showed no petechiae; dentition was poor with multiple caries. Carotid pulses were vigorous; there was no jugular venous distention. Bibasilar rales were heard in the lungs. The PMI of the heart was in the sixth intercostal space 2 cm lateral to the midclavicular line. S₁ was soft and S₂ loud and widely split. There was a grade IV/VI blowing holosystolic high-pitched regurgitant type murmur heard at the lower left sternal border that radiated to the axilla. An S₃ and S₄ were noted. There was an abdominal scar from earlier surgery. Splinter hemorrhages were seen under the nails of both hands. The joints showed no evidence of inflammatory reaction.

The hematocrit was 27% and the smear revealed microcytic hypochromic red cells. The sedimentation rate was in excess of 100 mm/hr. The white blood cells were 13,900/cu mm with 1% bands and 86% segmented neutrophils, 9% monocytes and 4% lymphocytes. The blood and serum electrolytes, glucose, and urea nitrogen were normal. The electrocardiogram displayed a normal sinus rhythm, a left anterior fascicular block, a Q₁T₁ configuration in the frontal plane, a deep QS in lead V₄, and elevated ST segments in left-sided transverse leads giving way, over a period of three weeks, to deeply inverted T waves—all characteristic of acute anterior left ventricular infarction. The thoracic roentgeno-

gram showed left-sided cardiomegaly. The serum lactic dehydrogenase and its isoenzyme, LDH₅, as well as the creatine phosphokinase, were elevated, indicative of recent myocardial necrosis. The C-reactive protein was 4+. Rheumatoid factor was positive in a 1 to 320 dilution; fluorescent antinuclear antibody was negative.

The patient was admitted to the intensive care unit where the diagnosis of acute myocardial infarction was initially thought to be secondary to aortic dissection in a marfanoid individual or to an embolus from a bacterial endocarditis of the mitral valve. The echocardiogram revealed a normal aortic root but ragged edges of the mitral echoes compatible with vegetations. After blood cultures were obtained, nafcillin, penicillin, and gentamicin were begun. When cultures grew out streptococcus viridans, medication was changed to penicillin and streptomycin and a four-week course of the former, a two-week course of the latter were completed. Subsequent blood cultures were negative. He did well throughout his hospital course.

A gated scintiscan prior to discharge showed an ejection fraction of 37%. He was discharged on digoxin 0.25 mg/day to be followed in the cardiac clinic. Cardiac catheterization was scheduled for the future with tentative plans to replace the insufficient mitral valve if indicated by impaired cardiodynamics, but it was learned that about a month after discharge the patient died suddenly while at a nearby greyhound race-track.

The final cardiac diagnoses were (a) inactive rheumatic fever, streptococcus viridans; (b) enlarged heart (left ventricle), mitral regurgitation, infective endocarditis of the mitral valve, coronary embolus (left coronary artery), acute myocardial infarction (anterior wall, left ventricle); (c) normal sinus rhythm; (d) class IVE improving to class IB.

KODANGUDI B. RAMANATHAN, M.D.:

There is an old dictum, true except in Africa, to the effect that when you hear hoof beats you don't look for zebras but horses. When a patient comes to you with acute myocardial infarction it is presumed he has underlying atherosclerosis of the coronary arteries. However, this is not always true.¹ As you have seen in this young man, infarction was due to a coronary embolus. He had a marfanoid appearance which could have been associated with dissection of the aorta with extension into a coronary artery, but this was ruled out by the subsequent findings.

In the absence of atherosclerosis there are

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.

Presented July 22, 1981.

numerous but infrequent causes (Table 1) of acute myocardial infarction or ischemia, of which the most common probably are coronary emboli. Others include congenital anomalies of the coronary arteries, trauma which you must be aware of in the City of Memphis or any inner city emergency room, coronary arteritis, metabolic and genetic causes, luminal narrowing by several mechanisms I will explain later, and oxygen demand in excess of supply in certain circumstances without coronary obstruction. After these, a group still remains where the cause is entirely unknown.

Let us consider each of these in turn.

Coronary Embolism

Emboli (Table 2) into a coronary artery are uncommon because flow into the coronary arteries occurs predominantly during diastole. During systolic ejection from the left ventricle, the aortic leaflets open, the coronary ostia in the sinuses of Valsalva are partially closed off, and emboli arising in the left heart will pass straight up into other systemic vessels. Despite this apparent mechanical protection the most common cause in the distant past was infective endocarditis. Although recent studies still indicate valvular disease as most often involved, bacterial endocarditis is not the most frequent of these (see below and Table 3).

In infective endocarditis of the aortic valve, perforation of a cusp often occurs. This exposes the respective sinus of Valsalva and coronary ostium more directly to the vegetation and aortic flow; the potential for coronary embolization is increased by both factors. Similarly, on the mitral valve, a vegetation which is on or has extended to the ventricular surface of a leaflet would, theoretically at least, more likely provide emboli to the systemic and hence coronary circuits. This might have been the situation in today's patient. Catheter-induced embolization does occur from dislodging a vegetation in an unrecognized case of infective endocarditis, or even in a known and successfully treated case if insufficient time has passed for the vegetation to become firmly fixed by healing.

Mural endocardial thrombi occur with acute myocardial infarction. That they can give rise to coronary emboli over and above the obstruction which caused the infarction initially is theoretically possible as one cause of "progression of infarction." Thrombi on prosthetic valves of both the artificial and tissue types can break off and

TABLE 1
CAUSES OF MYOCARDIAL INFARCTION
WITHOUT ATHEROSCLEROSIS

Embolic
Congenital
Trauma
Arteritis
Metabolic and genetic
Luminal narrowing by other mechanisms
Oxygen supply/demand imbalance
Idiopathic

TABLE 2
SOURCE OF CORONARY EMBOLI

Vegetation
Infective endocarditis
Intracardiac thrombus
Mural
Prosthetic valve
Intracardiac tumor
Myxoma
Iatrogenic
Coronary arteriography
Cardiopulmonary bypass
Paradoxical embolus

TABLE 3
CORONARY EMBOLI—DATA IN 55 PATIENTS*

Clinically recognized	15 (27%)
Cause of death	11 (20%)
Age	19-88 (avg 59)
Predisposing Causes	
Valvular disease	22 (40%)
Infective endocarditis	3
Nonbacterial thrombotic endocarditis	3
Prosthetic valve	8
Abnormal, noninfected	8
Coronary disease	9 (16%)
Cardiomyopathy	16 (29%)
Atrial fibrillation	13 (24%)
Cardiac catheterization	2 (4%)
Unknown	5 (9%)
Artery involved	
Left coronary artery	46 (72%)
Nature of infarct	
Transmural	48 (75%)

*Modified from Prinzl et al.²

enter a coronary artery. You have all heard of the various presentations that cardiac myxomas can and do have, especially when in the left atrium. These include the possibility of myxomatous material or thrombus on the tumor breaking off and going into a coronary artery.

A rare iatrogenic cause, coronary arteriography, especially when done with the Judkins technique where catheters are changed on a guide wire, may be complicated by a thrombus on the wire which may pass distally into the artery being studied. During cardiopulmonary bypass coronary air embolization is a possibility.

Paradoxical emboli (systemic veno-arterial by way of a right to left shunt) are possible in patients with atrial septal defect or a patent foramen ovale but are quite rare.

After coronary embolism, arteriography usually reveals completely normal proximal vessels with an abrupt discontinuity distally as though the artery had been chopped off. In a group of 1,050 hearts of patients with known cardiovascular or pulmonary disease studied by postmortem coronary arteriograms at Johns Hopkins,² of those with myocardial infarcts 55, or 13%, were found to be of embolic origin, contrary to the popular belief of their rarity. As you can see in Table 3, modified from the original,² clinical recognition was not frequent, being diagnosed premortem in only 15 of the 55, or 27%. Coronary embolus was the cause of death in the Hopkins series in 20%. With survival it is possible that the embolus can be recanalized or not detectable at all on angiography after spontaneous lysis. This may indeed form one kind of infarction which may be misinterpreted as idiopathic and without coronary disease.

The predisposing causes of coronary embolism in the Hopkins group are shown in Table 3. Valvular heart disease headed the list. It was the cause in 22 of the 55 patients, or 40%. Somewhat surprisingly, subacute bacterial endocarditis was involved in only three of them. The majority, 16, had their origin on prosthetic or abnormal noninfected valves. Mural thrombi due to atherosclerotic coronary artery disease accounted for 16%. Sixteen (29%) occurred in cardiomyopathy, especially the congestive form which has a propensity for the formation of endocardial thrombi in the left ventricle. Even in the absence of any other disease, atrial fibrillation accounted for 13, or 24% of the patients. Cardiac catheterization accounted for only two (4%). Considering the great frequency of the

procedure, the low incidence may be ascribed in part to the tendency to anticoagulate the patient to some extent before catheterization is performed. Unknown causes accounted for about 9% of the series.

Emboli enter the left coronary artery more often than the right, and of its two branches the anterior descending is preferred because it takes off from the left main branch in a more or less straight line, as opposed to the circumflex which arises from it at an angle.

If the embolus is relatively small, the resulting infarct will have different characteristics than one resulting from coronary atherosclerosis. In embolization, the vessel involved is usually distal; in the atherosclerotic infarct it is proximal. In coronary atherosclerosis some of the occlusion usually takes place gradually, giving time for collateral vessels to develop. The infarct that forms has a cone shape, with the base of the cone toward the endocardium. Further, necrosis reaches farther to the base of the heart and is more extensive in the atherosclerotic infarct by virtue of the usually higher occlusive lesion. A sudden embolic closure of a normal coronary artery results in an infarct that is more distal and transmural rather than predominantly subendocardial. These then are some of the pathologic distinctions which can be used clinically to some extent to make a judgment on the cause of infarction.

Congenital Coronary Disease

In congenital malformations the three major coronary anomalies that can be responsible for myocardial infarction are the anomalous origin of the left coronary artery from the pulmonary artery, a coronary AV fistula, and origin of the left coronary artery from the anterior (right) sinus of Valsalva. The latter is an important malformation relative to cardiac disasters in young athletes.

The origin of the left coronary artery from the pulmonary artery is not an intrauterine disadvantage for the myocardium, because in the fetus the pulmonary artery pressure is at systemic level; perfusion of the left coronary artery takes place in an antegrade manner. Soon after birth, however, the pulmonary artery pressure falls to its low adult normal levels. Flow in the abnormal left coronary will then decrease or reverse, and the area of myocardium it supplies is jeopardized and may undergo infarction. A majority of children with this anomaly die early, but if they sur-

vive, flow, instead of being antegrade, becomes retrograde in the left coronary artery via collateral vessels; there is, in effect, what is called coronary "steal." The only fully aerated blood from the aorta to reach the heart is through the right coronary artery. It perfuses the usual area of right coronary distribution and then enters the left coronary system to form a kind of left to right shunt. These children can survive once a collateral circulation is formed, but their later clinical course may be characterized by angina, myocardial infarction, or sudden death.

The usual congenital coronary fistula communicates with the right atrium or right ventricle; again there is a left to right shunt. These fistulae may either be asymptomatic or present with angina. Occasionally they go on to myocardial infarction if thrombosis or rupture of the fistulous communication occurs.

The last congenital anomaly is something that has been recognized more recently, and comprised 27% of the sudden deaths reported in a retrospective study of the Armed Forces Registry. Instead of the left coronary artery arising in the left sinus of Valsalva, it originates in the anterior or right sinus. Sometimes both coronary arteries arise as a single vessel from the right sinus. In either instance the left main coronary artery takes a course between the aorta posteriorly and the pulmonary artery anteriorly before branching as usual (Fig. 1). With severe exertion and increased cardiac output, presumably dilatation of the basal vessels exerts an occlusive pressure on the left coronary artery between them, with acute coronary insufficiency and sudden death. Four of the sudden deaths in athletes observed by Maron and his colleagues³ had this anomaly. By means of coronary arteriography the abnormal origin of the left coronary artery may be recognized but no obstruction will be seen with the patient at rest. Only severe exercise will alter flow, hence its propensity to sudden death in athletes with otherwise normal coronary arteries. There are some other acute fatal dysfunctions of normal coronary arteries following violent exertion that I will mention later.

Trauma

Trauma can be of two types. A bullet or sharp instrument entering the chest may sever, perforate, or contuse a coronary artery, especially the anterior descending branch of the left. What is not so frequently recognized is that indirect non-

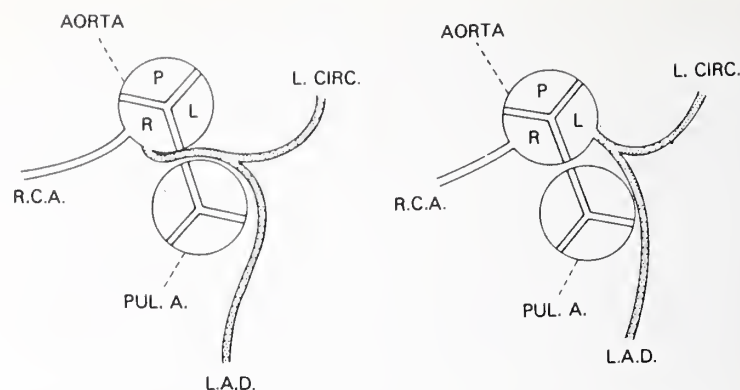


Figure 1. Diagram of anomalous origin of left coronary artery from the right (anterior) sinus of Valsalva (on the left), compared to the normal origin (on the right). (From Maron et al³ with permission of the authors and the American Heart Association, Inc.)

penetrating trauma may be followed after some variable delay by thrombus formation and occlusion, especially of the left anterior descending branch of the left coronary.

Iatrogenic Causes

Among the iatrogenic causes over and above those mentioned as causing coronary emboli are two that are potential complications of cardiac surgery. In patients with tetralogy of Fallot the left anterior descending artery can arise from the right sinus of Valsalva and will cross the base of the right ventricle or infundibulum on its way to the left ventricle. This area of the basal right ventricular myocardium is the one that is attacked by the surgeon in some instances, and if he does not know about this abnormal course beforehand from preoperative angiography, he may implicate the left anterior descending artery by whatever incision he makes, with resultant ischemia and infarction.

Replacement of the mitral valve requires the placing of sutures in the annulus quite close to the left circumflex artery and may inadvertently include it. However, this surgical complication is now fortunately rare.

Radiation can have two effects. It can accelerate atherosclerosis, at least in experimental animals. More important, it can induce fibrosis which may involve the coronary arteries, an involvement being recognized with increasing frequency.

Arteritis

Inflammation of the coronary arteries is something that is easy to understand, but it does not occur frequently. There are many causes, of which only the more frequent will be mentioned (Table 4). Syphilis and Takayasu's disease (re-

versed coarctation, or pulseless disease) can cause stenosis of the ostia of the coronary arteries. Coronary arteritis may be part of a systemic vasculitis such as systemic lupus erythematosus, rheumatoid arthritis, rheumatic fever, and polyarteritis nodosa; all can involve the coronary arteries with secondary thrombosis. Polyarteritis can give rise to the so-called peas in a pod appearance on angiography as a result of multiple occlusions and aneurysms.

There is one other condition, frequently recognized nowadays, called Kawasaki's disease or mucocutaneous-lymph node syndrome. It occurs in children and it has three manifestations: febrile episodes, mucocutaneous lesions, and involvement of the coronary arteries with occlusion and aneurysms, and possible subsequent congestive heart failure. It may be the one disease for which bypass coronary surgery is of value in children.

Metabolic and Genetic Causes

Metabolic causes of coronary disease are numerous but not common (Table 5). Hurler's disease and other forms of abnormal storage diseases can involve the coronary arteries with occlusion. Amyloidosis, in addition to causing the clinical picture of constrictive pericarditis or restrictive cardiomyopathy, can also involve the intramural coronary arteries with development of angina and infarction.⁴ Homocystinuria accelerates the atherosclerotic process as well as causing thrombus formation in a coronary artery. Pseudoxanthoma elasticum can involve peripheral as well as coronary arteries.

Other Mechanisms of Luminal Narrowing

Here I have grouped certain mechanical obstructions such as dissecting hematoma⁵ and coronary spasm (Table 6). An extension of an aortic dissection into the wall of a coronary artery, as seen in Marfan's syndrome, was ruled out in today's patient by the echocardiogram.

Spontaneous primary dissection of the coronary arteries occurs in Ehlers-Danlos syndrome. It also is encountered at an early adult age in normotensive women, particularly near the postpartum period. Iatrogenic causes of primary dissection of a coronary artery are more frequent and include coronary catheterization, cardiac surgery, and spasm. As opposed to the usual involvement of the left coronary by an embolus, dissection is more frequent in the right coronary artery, perhaps because of the lower right ven-

TABLE 4
CAUSES OF CORONARY ARTERITIS

Syphilis
Takayasu's disease
Vasculitis
Systemic lupus erythematosus
Rheumatoid arthritis
Rheumatic fever
Polyarteritis nodosa
Kawasaki's disease

TABLE 5
METABOLIC AND GENETIC CAUSES OF CORONARY OCCLUSIVE DISEASE

Hurler's disease
Amyloidosis
Homocystinuria
Pseudoxanthoma elasticum

TABLE 6
CORONARY LUMINAL NARROWING BY OTHER MECHANISMS

Dissection of the aorta—Marfan's syndrome
Dissection of the coronary artery
Primary: Ehlers-Danlos syndrome
Iatrogenic
Spasm
Occupational
Variant angina
Muscle bridge

tricular intramural pressure available to oppose high intraluminal pressure of whatever cause. Cannulation of coronary arteries for perfusion during bypass surgery formerly was done with stiff cannulae which could initiate dissection. Direct coronary trauma may cause dissection as mentioned earlier. Coronary arterial systolic hypertension can be produced by a stenotic aortic prosthesis. When the poppet is not moving properly, an area of significant systolic stress is created below it at the level of the coronary sinuses; these abnormal dynamics can lead to a dissecting coronary hematoma. Closed or open chest cardiac massage can do the same thing.

Table 7, from the paper by Bulkley and Roberts,⁵ lists the differences between a dissect-

TABLE 7

DIFFERENCES BETWEEN DISSECTION OF THE AORTA AND PRIMARY DISSECTION OF A CORONARY ARTERY*

Data	Dissecting Hematoma of Aorta	Dissecting Hematoma of Coronary Artery
Age	Older	Younger
Sex	Men	Women
Hypertension	+	0
Postpartum state	Rare	Frequent
Left ventricular hypertrophy	+	0
Atherosclerotic plaques (0-4 + 1)	1-2 +	0-1 +
Luminal narrowing	0	+
External rupture	+	0
Chronic dissection	Frequent	Rare
Intimal tear	Frequent	Rare

*Modified from Bulkley and Roberts.⁵

ing aneurysm of the aorta and a primary dissection of the coronary artery as seen in their cases. In addition it is to be noted that dissection of the aorta does not usually present at the outset as myocardial ischemia. By the time an aortic hematoma dissects into a coronary artery the aortic valve has been ruptured or the dissection has extended into the pericardium, with abrupt exitus in either instance before infarction has occurred.

In 1959 Prinzmetal et al⁶ described a syndrome of variant angina, now called vasospastic angina, with clinical and pathologic features differing from the usual atherosclerotic myocardial ischemia. The chest pain is nonexertional, ST displacement with the pain (and sometimes without pain) is upward rather than down, and arrhythmias are common. The pain is relieved by nitroglycerin, but these patients get negligible relief or even worsening of pain with β -adrenergic receptor blockade. A fair number of them may have some degree of atherosclerotic luminal narrowing but some have normal coronary arteries on angiography. Latent spasm may be provoked by injection of ergonovine maleate; methacholine has also been used although the former seems now to be in favor. Spasm thus produced is occasionally irreversible and therefore not without hazard.

Occupational spasm, especially in munitions workers and nitrate industries, may display the so-called Monday morning phenomenon, seen in people who have been exposed chronically to air

polluted with high concentrations of nitrates. They tend to have spastic coronary arteries with angina and even infarction ("dynamite heart") when they are removed from occupational exposure such as over a weekend or on holiday away from the factory.

A rare cause of sudden death in athletes is the muscle bridge. This myocardial band crosses the left anterior descending coronary artery in its proximal portion; on contraction it can presumably occlude that vessel.

Oxygen Supply/Demand Imbalance

If the demand for oxygen is greater than the supply for a certain minimal period of time the area of myocardium involved will undergo necrosis. The situation occurs frequently in aortic valve disease. Although it does not lead to infarction, especially in aortic stenosis, angina is a frequent symptom. However, in 30% of the patients with aortic stenosis, by the fifth decade of life there is associated atherosclerotic coronary disease. This leaves two thirds in this group in which angina, if present, is on the basis of increased wall tension and oxygen demand, easily determined by angiographic demonstration of patent coronary vessels.

In 41 patients with aortic stenosis and 10 patients with aortic regurgitation,⁷ angina was the presenting symptom in a fair number. Nocturnal pain (angina decubitus) was more common in aortic insufficiency. As opposed to aortic stenosis, where a supply/demand disproportion exists from a pressure overload, in aortic regurgitation the dominant filling of the coronary arteries during diastole is impaired because of the incompetence of the valve and the resulting low diastolic aortic head of pressure.

In 50% of the reported trained athletes who died suddenly,³ the disease involved was hypertrophic obstructive cardiomyopathy. In my opinion, in a patient who seeks evaluation to determine the safety of continuing stressful exercise, the evaluation should include an M mode echocardiographic examination to rule out the existence of hypertrophic obstructive cardiomyopathy.

The availability of potent antihypertensive agents, such as nitroprusside carelessly used, may create in the hypertrophied heart of the hypertensive patient a discrepancy between oxygen demand and perfusion pressure to insure adequate coronary flow, resulting in myocardial necrosis. Cerebrovascular infarction in a similar

situation has been reported by several British investigators.

Nonatherosclerotic Coronary Syndromes in the Young Female

Contraceptive pills have been implicated as a cause of infarction in young women. Oliver⁸ in Edinburgh has written a good deal about this subject. In the postpartum state primary dissection of a coronary artery occurs for unknown reasons, as mentioned earlier. Lastly, what is called syndrome X is a coronary syndrome for which no cause or associated condition is known. It happens in young women, often in the early menopause. The clinical presentation is of simple and straightforward exertional angina with ST depression on stress testing, but the coronary arteriogram is normal. Spasm cannot be provoked and emboli cannot be implicated. In some, abnormal lactic acid production and abnormal oxyhemoglobin dissociation curves have been demonstrated. I presume that time will reveal additional mechanisms of coronary insufficiency.

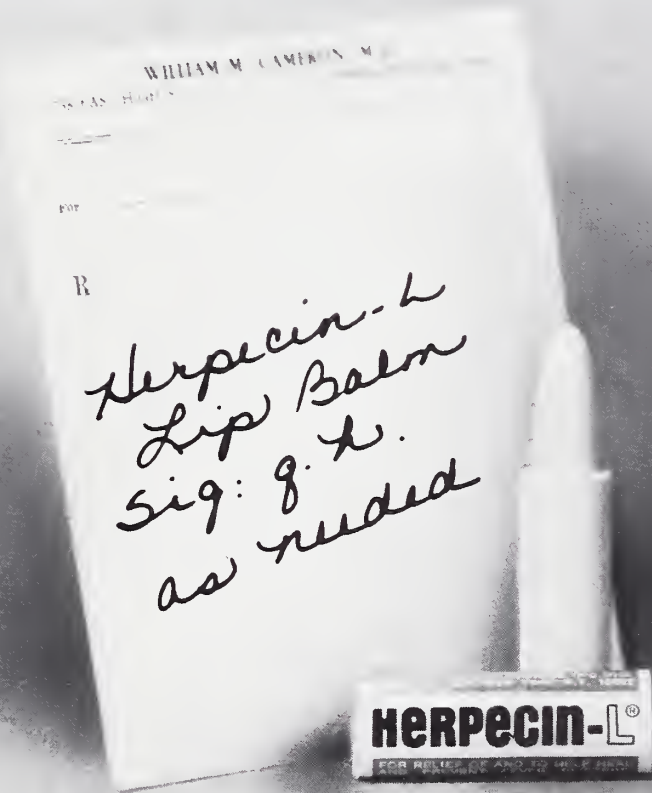
Finally, philosophers have told us you see

only what you look for and you recognize only what you know. It is not possible to understand coronary artery disease only from the angiographically determined anatomy of the coronary arteries. Myocardial ischemia can result from multiple anatomic, physiologic, and biochemical factors which alter the absolute and relative adequacy of coronary flow. A comprehensive knowledge of these is indispensable for the successful management of the coronary syndromes now known, as well as for those which almost certainly remain to be discovered.

REFERENCES

1. Chaitlin MD, McAllister HA, de Castro CM: Myocardial infarction without atherosclerosis. *JAMA* 231:951-959, 1975.
2. Prizel KR, Hutchins GM, Bulkley BH: Coronary artery embolism and myocardial infarction. A clinicopathologic study of 55 patients. *Ann Intern Med* 88:155-161, 1978.
3. Maron BJ, Roberts WC, McAllister HA, et al: Sudden death in young athletes. *Circulation* 62:218-229, 1980.
4. Smith RRL, Hutchins GM: Ischemic heart disease secondary to amyloidosis of intramyocardial arteries. *Am J Cardiol* 44:413-417, 1979.
5. Bulkley BH, Roberts WC: Dissecting aneurysm (hematoma) limited to coronary arteries. *Am J Med* 55:747-756, 1973.
6. Prinzmetal M, Kennerly R, Merlis R, et al: Angina pectoris. 1. A variant form of angina pectoris. *Am J Med* 27:375-388, 1959.
7. Basta LL, Raines D, Najjar S, et al: Clinical, haemodynamic, and coronary angiographic correlates of angina pectoris in patients with severe aortic valve disease. *Br Heart J* 37:150-157, 1975.
8. Radford DJ, Oliver MF: Oral contraceptives and myocardial infarction. *Br Med J* 3:428-430, 1973.

Dx: recurrent herpes labialis



OTC.

See PDR for
Product Information.

For samples, write:
Campbell Laboratories Inc.
P.O. Box 812-M, FDR Sta.
New York, NY 10150

In Tennessee, "Herpecin-L" Lip Balm is available at
all Super D Drug Stores and other select pharmacies.

Diabetic Ketoacidosis During Treatment With a Portable Insulin Pump

Ruth Miller, M.D. (endocrinology research fellow, St. Thomas Hospital): The patient is a 46-year-old woman admitted with moderately severe diabetic ketoacidosis. She developed diabetes after measles at age 9, but had never had diabetic ketoacidosis before, and had no history of retinopathy, nephropathy or cardiovascular disease. For the past several years she has had severe painful peripheral neuropathy, and bothersome autonomic neuropathy manifested by gastric atony and neurogenic bladder. Her diabetes has always been difficult to control and there have been many problems with hypoglycemia. She was started on continuous subcutaneous insulin infusion (CSII) using an Auto-syringe pump in June, 1980, and had done fairly well over the past year with home blood glucose monitoring several times daily. Her average blood sugar in August, 1981, the month prior to admission, was 150 mg/dl (the daily average of three or four finger-stick blood glucose estimates with the Chemstrip bG reagent), and her most recent glycosylated hemoglobin level was 10.2%.

Two weeks prior to admission she developed a small abscess of the lower abdominal wall at the site of the insulin infusion needle. It was not fluctuant, and on oral cloxacillin the lesion was resolving at the time of admission. About a week prior to admission she developed nausea and anorexia and had more frequent hyperglycemia than usual, but had taken extra insulin boluses with her infusion pump. On the day of admission, she became progressively drowsy, refused all food, and then became disoriented.

Physical examination revealed a drowsy, intermittently disoriented woman with a blood pressure of 96/60 mm Hg, pulse 125/min, respirations 30/min, and temperature 100.4 F. The abdominal wall abscess was nonfluctuant and nontender, and there were no localizing neurological signs. The

deep tendon reflexes were absent. The rest of the examination was negative. There was no evidence of infection.

Laboratory tests on admission showed moderate ketoacidosis. The pH was 7.26, PCO_2 19.8, plasma glucose 682 mg/dl, a serum acetone was positive at a 1:16 dilution, the sodium was 140 mEq/liter, potassium 4.8 mEq/liter, chloride 100 mEq/liter and HCO_3^- 12 mmol/liter. The BUN was 29 mg/dl. The WBC count was 30,000/cu mm with a left shift. Cultures of blood, urine, and cerebrospinal fluid were normal. Chest x-ray was normal.

The patient was treated with large quantities of intravenous fluid, receiving over 8 liters in the first 12 hours, and an intravenous insulin drip containing five units per hour. She was not given a bolus of intravenous insulin on admission. Because of concern about an occult infection, she was started on ampicillin, clindamycin, and tobramycin, but these were discontinued after a few days. The patient did not improve clinically, and in fact became stuporous. She had a transient cardiorespiratory arrest the next morning and although she was resuscitated, she has not regained consciousness. Her serum phosphate dropped from 5.2 mg/dl on admission to 0.6 mg/dl the following day despite the use of potassium phosphate in the intravenous fluids. The subsequent hospital course has been a long and stormy one, and subsequent details are omitted because they are not pertinent to the present discussion. The working diagnosis is that she has developed CNS dysfunction as a consequence of cerebral swelling, which sometimes occurs for unknown reasons after diabetic ketoacidosis.

Alan L. Graber, M.D. (endocrinologist, St. Thomas Hospital): We considered the possible causes of diabetic ketoacidosis extensively in this woman. We feared that a subtle infection had precipitated diabetic ketoacidosis, but no evidence could be found. The toxic shock syndrome was considered, since a vaginal tampon was in place on admission, but the lack of rash and the

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and Vanderbilt Diabetes Research and Training Center, is edited by Alan L. Graber, M.D.

clinical course were not consistent with this diagnosis. The pump was working, and she was very reliable and compulsive with regard to measuring and diluting the insulin in the syringe which is placed on the pump. There were no leaks or breaks in the infusion system. Nevertheless, we concluded that the etiology of the ketoacidosis was insulin deficiency, i.e., she was not receiving insulin from her pump delivery system. We had seen another patient in whom insulin absorption from subcutaneous infusion sites was erratic while receiving continuous subcutaneous insulin infusion. A tender swelling would develop at the site of the infusion needle about 24 hours after its position was changed, and about that time her blood glucose would begin to increase. We suspected that the insulin was either degraded locally or was prevented from entering the circulation when the tender subcutaneous nodule appeared, resulting in insulin deficiency. We postulated that similar factors affected the patient under discussion today.

Oscar Crofford, M.D. (director, Vanderbilt Diabetes Research and Training Center): I agree that it is probable that this patient's episode of ketoacidosis was caused by lack of adequate insulin delivery. The insulin pump should be regarded as an investigational tool, in my opinion, as it has not proved reliable and practical enough for routine use. Many investigators in England who were enthusiastic about the pumps before they were used in this country are now discarding them because of complications. In addition, a recent study at Pittsburgh demonstrated an increased incidence of diabetic ketoacidosis in young patients on continuous subcutaneous insulin infusion. Three of six patients had a total of six hospitalizations for diabetic ketoacidosis while on CSII, and none of them had previous episodes of ketoacidosis.¹

Dr. Graber: Diabetic ketoacidosis developed in another patient, a 12-year-old boy who had used the Mill Hill infusion pump for the three preceding months with excellent results. His glycosylated hemoglobin had decreased from 15% to 11.6%, and his recent home blood sugars had usually been 80-180 mg/dl. He was compulsive in home blood sugar monitoring and in inspecting his pump for malfunction. Twenty-four hours before admission he phoned to indicate that unexplained hyperglycemia had occurred, and he was instructed to take supplemental 5-unit insulin boluses every three hours if his blood sugar was above 180 mg/dl, and 10-unit boluses if above

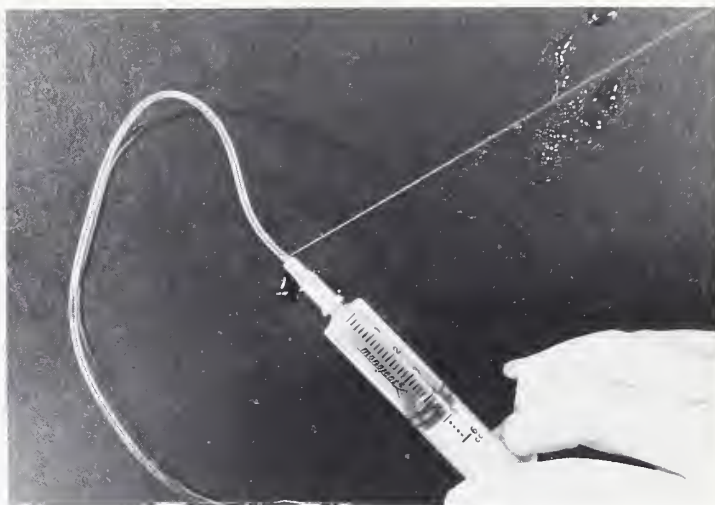


Figure 1. Unnoticed leakage of plastic catheter from portable insulin infusion pump, resulting in diabetic ketoacidosis.

400 mg/dl. Eight hours before admission his family called to report that he had not improved, despite the boluses, and that the pump was working normally. Later that day he was brought to St. Thomas Hospital stuporous, with ketoacidosis. The pump and its operation were normal, but a leakage was noted in the plastic catheter at the site of attachment to the catheter hub (Fig. 1). The leak had not been detected by the patient or his family, since the pump was worn on the outside of his blue jeans. The patient improved rapidly with conventional therapy for diabetic ketoacidosis and subsequently has remained in satisfactory control, using conventional multiple subcutaneous insulin injections daily.

Although ambulatory subcutaneous insulin infusion by portable pumps has been associated with improved metabolic control in some insulin dependent diabetic patients,² an extensive list of inconveniences and complications associated with pump use has followed, including kinking or falling out of the catheter, pump failures or malfunction, improper preparation of infusate, insulin overdoses, local lipodystrophy, and subcutaneous infections or sterile abscesses.³ Undetected leakage of the plastic catheter has not previously been reported as a cause of diabetic ketoacidosis.

REFERENCES

1. Transu D, Gutai JP, Olsen RK: Comparison of intensive conventional management and subcutaneous insulin infusion (CSII) in adolescents. *Diabetes* 30 (suppl): 15A, May 1981, reported at 41st Annual Meeting of the American Diabetes Association, June 1981.
2. Barbosa J, Menth L, Eaton J, et al: Long term ambulatory subcutaneous insulin infusion versus multiple daily injections in brittle diabetic patients. *Diabetes Care* IV: 269-274, 1981.
3. Marliss EB, Caron D, Albisser AM, et al: Present and future expectations regarding insulin infusion systems. *Diabetes Care* IV: 325-327, 1981.

RECOMMENDED READING

1. Kreisberg RA: Diabetic ketoacidosis: new concepts and trends in pathogenesis and treatment. *Ann Int Med* 88:681-695, 1978.
2. Brenia R, Ripoll I: Diabetic ketoacidosis. *JAMA* 241:510-511, 1979.

Radiology Case of the Month

TIMOTHY McGHEE, M.D. and RANDALL L. SCOTT, M.D.

Several years after an aortic Y-graft, a 68-year-old white man presented with a blood pressure of 230/90 mm Hg. He was subjectively asymptomatic. Selected films from a hypertensive excretory urogram at zero and three minutes after contrast administration are submitted for interpretation (Fig. 1). What is the best diagnosis?

- (1) Unilateral renal artery stenosis
- (2) Bilateral renal vein thrombosis
- (3) Bilateral ureteral obstruction
- (4) Bilateral renal artery stenosis

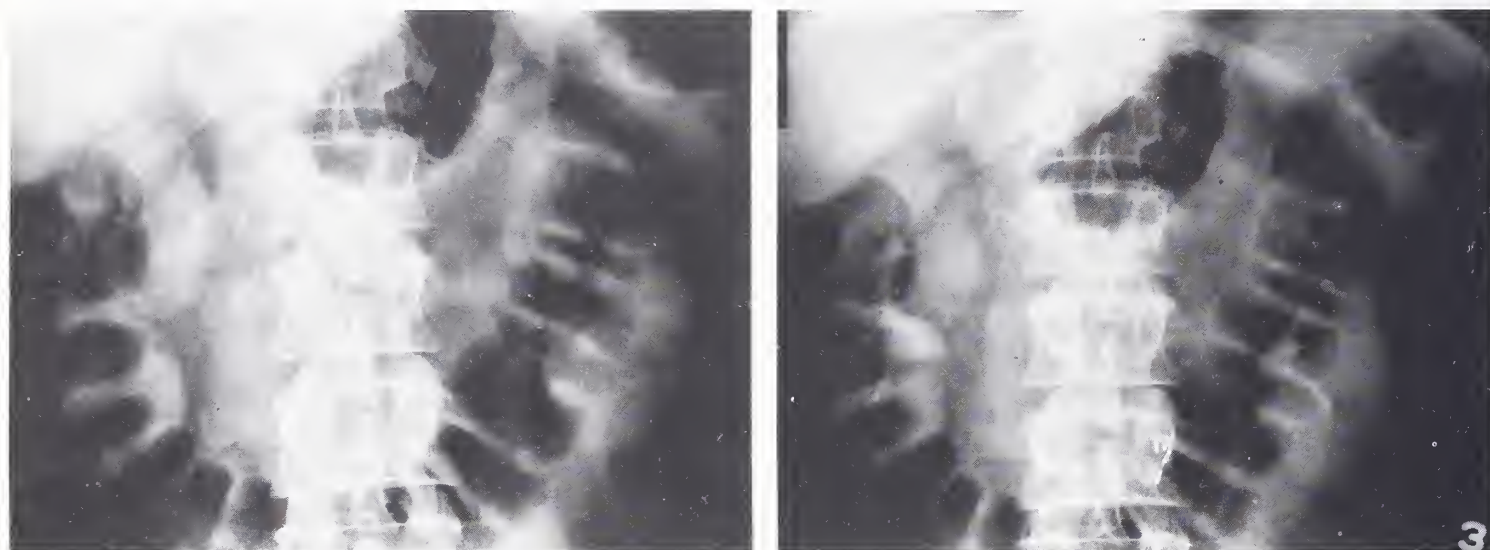


Figure 1. Films taken at 0 minutes (left) and 3 minutes (right) from excretory urogram.

Radiographic Findings

Figure 1 shows two films from the patient's excretory urogram. The zero minute film demonstrates a symmetrical nephrogram bilaterally with normal sized kidneys. At three minutes there is bilateral excretion into normal collecting systems. The study was felt to be within normal limits.

Bilateral renal vein thrombosis is not the best diagnosis since the kidneys would be expected to enlarge and show decreased function in the acute phase. In addition, such patients commonly have fever, flank pain, hematuria and leukocytosis. In long-standing renal vein thrombosis the kidneys

are small and globally wasted. Even though renal vein thrombosis can be present in asymptomatic patients with a normal excretory urogram, thrombosis in the adult is usually a complication of other renal diseases such as amyloidosis, glomerulonephritis, or pyelonephritis.^{1(p163)} Thrombosis of the superior vena cava due to trauma, tumor invasion, or compression may occlude the renal veins, but no such condition was evident in this patient.

Bilateral ureteral obstruction causes delayed renal function. In addition, dilatation of the renal pelves and ureters would be seen down to the level of the obstruction. The kidneys enlarge during the acute phase, whereas with long-standing obstruction the kidneys show wasting, with cortical loss due to back pressure atrophy.^{1(p182)} The absence of these findings ex-

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

cludes the diagnosis of bilateral ureteral obstruction.

Unilateral renal artery stenosis is a possibility in a patient with hypertension. With unilateral renal artery stenosis the positive urographic findings include delayed function on the stenotic side, small kidney size, hyperconcentration of contrast, and collateral vascular impressions on the renal pelvis. None of these findings was present in this case, making unilateral renal artery stenosis unlikely.

With hypertension and a normal excretory urogram the best diagnosis from the choices offered is bilateral renal artery stenosis. Figure 2 is a film from the patient's abdominal aortogram demonstrating high grade stenosis of the renal arteries along with occlusion of the Y-graft just distal to the renal arteries. Lumbar and retroperitoneal collaterals extend inferiorly to supply the pelvis and lower extremities.

Discussion

In adults most hypertension is essential, or primary. Renovascular and renal parenchymal abnormalities are the most common cause of secondary hypertension, but their prevalence is quite low. Renovascular hypertension was found in 4.5% and hypertension secondary to renal parenchymal disease in 5.2% of a referral population of 4,939 patients.² The most common etiologies of renovascular hypertension are arteriosclerosis and fibromuscular hyperplasia. Renal artery stenosis is bilateral one-third of the time.³

The definitive investigation for renal artery stenosis is arteriography, but because of expense, morbidity, and time, other methods are commonly used for the screening of hypertension. The most widely used method is the rapid sequence or hypertensive urogram. This examination is performed by rapidly injecting intravenously a 50-ml bolus of water-soluble urographic contrast material, followed by sequential filming of the kidneys at 0,1,2,3,4 and 5 minutes. The three most reliable signs of renovascular disease are unilateral delay of one minute or more in calyceal appearance time, decreased renal length with a left kidney more than 1.5 cm shorter than the right or right kidney more than 2.0 cm shorter than the left, and delayed hyperconcentration of contrast material on the abnormal side. Ancillary findings such as collateral vascular impressions are also helpful.

A positive hypertensive urogram indicates renovascular disease, defined as the demonstration



Figure 2. Abdominal aortogram showing occlusion of the infrarenal aorta and bilateral renal artery stenoses (arrows).

of a renal arterial abnormality. To determine if the arterial lesion is causing hypertension, renal vein renins must be obtained. For this reason a positive hypertensive urogram correlates poorly with surgical outcome.

The role of the rapid sequence urogram as a screening procedure for hypertension remains controversial. False-negative rates have been quoted from 17% to 53% depending on the degree of stenosis.⁴ When stenoses are bilateral and symmetrical, such as in this case, asymmetry of function and size may not occur, and renal artery lesions may be missed. Some authors feel that rapid sequence urography should be used as a screening procedure only on patients between the ages of 40 and 55 who do not respond to medical therapy for hypertension. Children with hypertension and adults in whom there is strong clinical suspicion of renal artery stenosis deserve angiography.⁵ Urography should be obtained to exclude lesions that would preclude surgery. When available, digital intravenous angiography will probably play an important role.

DIAGNOSIS: (4) Bilateral renal artery stenosis.

REFERENCES

1. Davidson AJ: *Radiologic Diagnosis of Renal Parenchymal Disease*. Philadelphia, WB Saunders Co, 1977.
2. Gifford RW: Evaluation of specific causes of hypertension: cost effectiveness considerations, in Weinstein MC, Strason WB: *Hypertension: A Policy Perspective*. Cambridge, Mass, Harvard University Press, 1976, p 198.
3. Bookstein JJ, Abrams HL, Buenger RE, et al: Radiologic aspects of renovascular hypertension, part 3: Appraisal of arteriography. *JAMA* 221:368-374, 1972.
4. Stanley JC, Fry WJ: Surgical treatment of renovascular hypertension. *Arch Surg* 112:1291-1297, 1977.
5. Webb JA, Talner LB: The role of intravenous urography in hypertension. *Rad Clin North Amer* 17:187-195, 1979.

Tennessee Renal Disease Program

GREGG MAJURE

Recognizing the financial crisis as well as the critical medical care needs of the many Tennesseans suffering from chronic renal disease, the Tennessee legislature on April 20, 1971 passed Senate Bill 410 directing the Department of Public Health to establish a program for the care and treatment of persons suffering from chronic renal disease and to assist on a continuing basis those unable to pay for such services. The legislature appropriated \$250,000 for the administration of the program during fiscal year 1971-1972.

Since its inception, there have been many changes in the program in terms of growth in numbers of patients served, services provided, and operating costs. The administrative staff is assisted in establishing guidelines and policies by the Renal Disease Advisory Committee which is composed of two hospital representatives, one from the medical schools, one from the dialysis centers, one from a volunteer agency, one from local public health agencies, three physicians, and two representatives from the general public.

When the program first began it was estimated that about 300 persons would need the services and that deaths would equal the number of patients added each year. Since the first patient became eligible in August 1971, 1,120 persons have been provided service by the program, and an average of seven patients per month were added until fiscal year 1976-1977, when the average jumped to 11 per month. In 1979-1980 it climbed to 14 per month and to 16 during 1980-1981. The program is currently serving 659 patients, with a net increase of 107 patients in fiscal year 1980-1981 (189 new patients minus 82 deaths and transplants).

Passage of an amendment to the Social Security Act which made making those persons with chronic renal disease eligible for Medicare begin-

ning in July 1973, along with coverage later by Medicaid, has had a beneficial effect on the services required of the Department of Public Health's Renal Disease Program. There are, however, Tennesseans suffering from chronic renal disease who are not eligible for either Medicare or Medicaid, and have no private medical insurance. In such cases, the state program pays for 100% of the chronic renal disease related medical expenses. From the beginning, the program assisted in developing and expanding life-saving care and treatment of persons suffering from chronic renal disease, including dialysis and medical procedures, programs for the prevention of chronic renal disease, pharmaceutical services, rental of home dialysis equipment, equipping dialysis centers, and educational programs.

Since 1973, the program has become primarily a fee-for-service payment program while assisting in the provision of many services, some of which are payment for dialysis and professional and laboratory fees when the patient has no other coverage; payment for most renal disease related pharmaceutical services, when the patient has no other coverage; payment for inpatient hospitalization for transplantation services and five days of renal disease related inpatient hospitalization, with prior authorization; payment for prior authorized seven-day diagnostic work-ups; and payment of 15% of the cost for in-center dialysis in the freestanding clinics.

The operation budget for the Renal Disease Program has increased progressively from the \$250,000 in 1971-1972 to \$990,500 in 1981-1982. Despite Medicare and Medicaid coverage the program has required budgetary "bailouts" from other programs four out of the ten years it has existed. The services provided were restricted, effective July 1, 1980, but these restrictions were eased somewhat on Jan. 1, 1981, and the cost of

From the Tennessee Department of Public Health, Nashville.

(Continued on page 52)

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 75-year-old man was admitted to the hospital with right anterior pleuritic chest pain unaccompanied by dyspnea or diaphoresis. Previous atrial fibrillation resulted from therapy with digoxin 0.125 mg daily and quinidine 200 mg three times daily. His blood pressure was 220/102 mm Hg. He was afebrile, no rubs, murmurs or gallops were audible, and there was no evidence of congestive failure. Admission BUN was 36 mg/dl with a creatine of 2.2 mg/dl and the electrolytes were normal, including a potassium of 4.2 mEq/liter. Radioimmunoassay thyroxine-triiodothyronine levels were subsequently normal at 9.3 μ g/dl and 132 μ g/dl respectively. The digoxin level was 2.8 ng/ml (therapeutic 0.8-2.2) and the quinidine level was 5.5 μ g/ml (therapeutic 2.3-5.0). An electrocardiogram was obtained (Fig. 1).

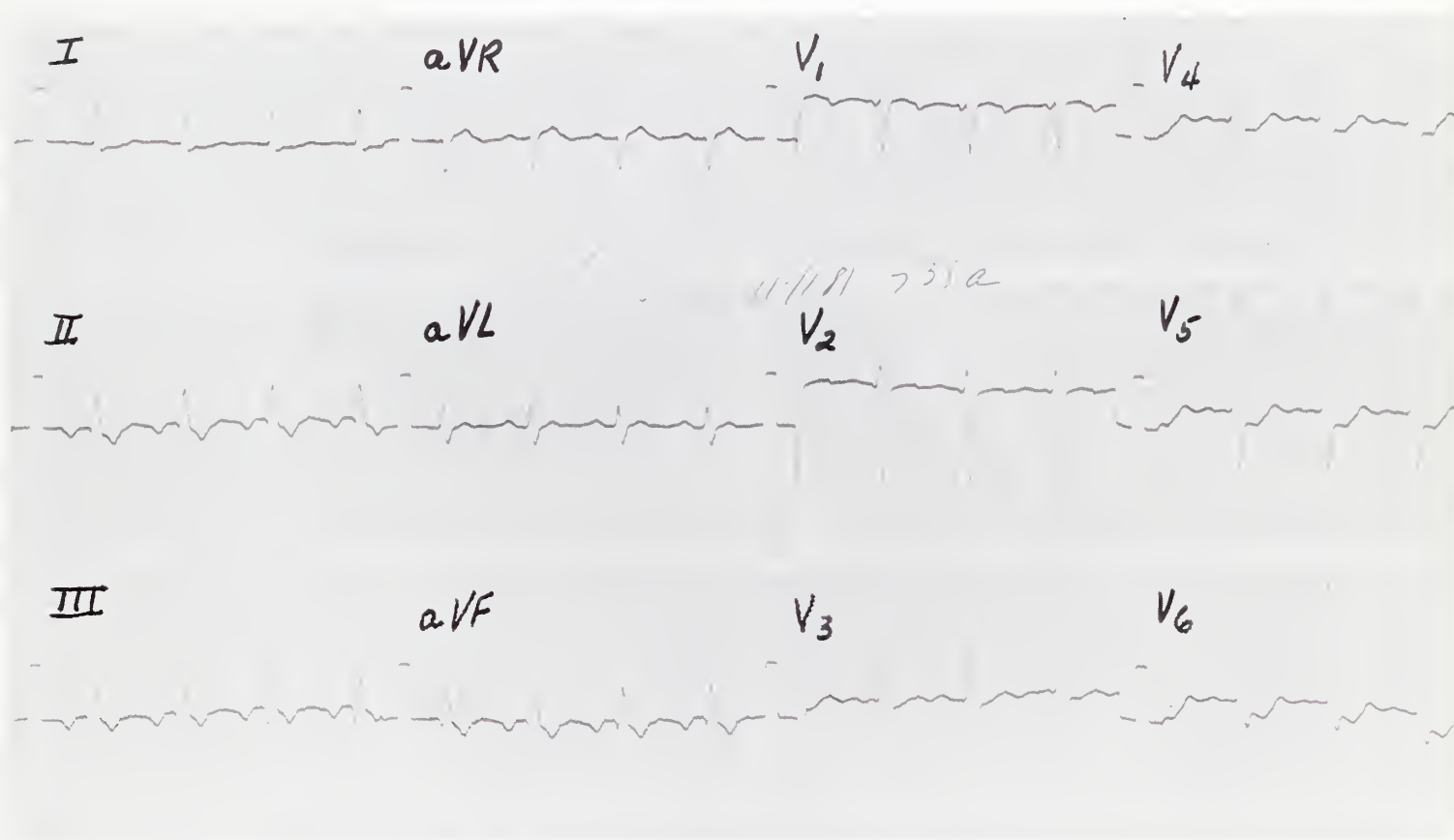


Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380,
Nashville, TN 37202.

Discussion

Figure 1 shows a regular R-R interval at a rate of 85/min. Inverted P waves can be seen deforming the T waves in leads II, III, and aVF. Inverted P waves in these leads reflect atrial depolarization from the base superiorly toward the sinus node (located at the superior caval atrial junction). This is the reverse of the normal atrial depolarization direction and suggests that the atrial impulse originates in the floor of the atria rather than the sinus node. The atrial rate is actually 170/min and appears to be twice the ventricular rate. In leads V₁ and V₂, however, the P-R interval appears significantly shorter than the interval seen in the limb leads, suggesting that a fixed 2:1 atrial-ventricular (AV) relationship may not be present.

An atrial rate of 170/min is uncommonly slow for atrial flutter (which is rarely seen below a rate of 220/min and more usually seen at a rate of 250/min to 300/min). Atrial rates below 140/min are often arbitrarily labeled junctional tachycardia, while those from 140/min to 250/min are usually called atrial tachycardia. Atrial rates relate poorly to the site of impulse formation, however, so it appears most appropriate to call this rhythm a supraventricular tachycardia.

The slight variation in P-R interval between the standard limb leads and precordial leads suggests that there may be some degree of AV dissociation rather than a simple 2:1 block. A longer rhythm strip would be important to conclu-

sively document this impression.

The QRS complex is widened at 0.11 seconds. There are small q waves in aVF of 0.04 seconds duration and 1 mm depth. This Q wave is of borderline magnitude and duration for reading inferior infarction.

Significant repolarization changes are present with ST segment depression in the lateral precordial leads and lead I. There is prominent T wave inversion in the inferior leads (II, III and aVF). The serum digoxin level is above the usual therapeutic range. Digitalis toxicity is a clinical diagnosis and should not be made from serum digoxin levels alone.¹ Supraventricular tachycardia with block or AV dissociation (as in the above tracing) is highly suggestive of digitalis toxicity. Quinidine is well known to increase digoxin levels and may precipitate digitalis toxicity.² The QRS prolongation is compatible with quinidine therapy but the Q-T interval (which is often prolonged by quinidine) is 0.42 seconds and is not notably prolonged.

CONCLUSION:(1) Supraventricular tachycardia, probably with AV dissociation, suggesting digitalis intoxication; (2) Nonspecific intraventricular conduction delay; (3) Nonspecific ST-T wave changes.

REFERENCES

1. Noble RJ, Rothbaum DA, Watanabe AM, et al: Limitations of serum digitalis levels. *Cardiovascular Clinics*. Philadelphia, F.A. Davis Co, vol 6, no 1, 1974, p 300.
2. Leahey EB Jr, Reiffel JA, Drusin RE, et al: Interaction between quinidine and digoxin. *JAMA* 240:533, 1978.

Public Health Report . . .

(Continued from page 50)

the services now provided is well within the operating budget. Grants of \$125,000 a year were allocated to the three kidney foundations in Tennessee for transportation assistance to chronic renal disease patients.

The program is actively seeking supplemental Medicare insurance coverage for the patients who have Medicare coverage only. Medicare now pays 80% of the cost of dialysis and the program pays an additional 15%. The possible cutbacks in the Medicare and Medicaid programs

that could affect Tennesseans suffering from chronic renal disease are major concerns, and the full impact has not yet been determined.

Today, Tennesseans with chronic renal disease no longer must face an immediate life or death choice because of limited treatment and finances. Medical advances in kidney transplantation and dialysis enable these patients to live near-normal lives. Tennessee's Department of Public Health Renal Disease Program has had a large role in making this possible.



ALLEN S. EDMONSON

Physician Responsibility

I have been told that recent court decisions have supported and in some cases perhaps enlarged upon the concept of the responsibility of hospital medical staff officers and entire medical staffs for the performance of individual physicians in relation to patient care. The strictly legal responsibility has apparently always rested upon the hospital board of trustees or governing body while it was understood by everyone involved that their oversight was usually effected through the medical staff and their officers.

Now the physicians themselves have been held legally responsible for the patient care activities of their peers. As a consequence, mechanisms for supervision have been made even more necessary, and where already in place, made more active and efficient. Large medical staffs have special problems because of the numbers involved and the frequent lack of personal contact among all the staff members. Small medical staffs also may be unique in that objectivity becomes very difficult when very close acquaintances attempt peer review and thus the issues rarely can be kept clear of personalities and conflicts of interest. Regardless of the size, members of hospital medical staffs have been accepting this responsibility more or less gradually over many years. I'm sure all physicians agree that evaluation, first, of medical skill and competence, and later, the continual evaluation of physical, mental, and emotional stability and performance in treating patients, should be primarily the responsibility of physicians. In Tennessee our "impaired physician" program has helped tremendously with management after identification of mental and behavioral problems. Through this program, objectivity has been best demonstrated and responsibility shared by an outside-the-hospital agency. The really difficult areas of physical impairment, aging, and senility along with the easier to judge and act upon, medical competence, remain the present challenges to our medical staff organizations. Many times the responsibility is not easy to accept but we must. It should not be necessary for others to do this for us.

Allen S. Edmonson M.D.

journal of the tennessee medical association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson

WINSTON P. CAINE, JR., M.D., Chattanooga

GEORGE W. SHANNON, M.D., Jackson

DILLARD M. SHOLES, JR., M.D., Johnson City

FRANCIS W. GLUCK, M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

JANUARY, 1982

editorials

New Year's Greetings

It is now Thanksgiving, with Christmas coming up soon. By the time you read this New Year's Day will have come and gone, and we will be well into 1982. I trust the New Year finds you well, prosperous, and happy, not necessarily in that order.

With this issue I begin my second decade as editor of the JOURNAL. The time has passed quickly, and it seems only yesterday that the mantle passed to me from the durable and still

productive Rudie Kampmeier. There have been some changes during those years, but not too many. We have changed printers twice and the cover color once. We have added a managing editor, and TMA has retired an executive director and gotten a new one who was not really new. In fact, it was he who taught me most of what I know about journal publishing, as he and I did it all for the first few years. The editor of a journal is beholden to many people, seen and unseen, and it bears repeating that I am grateful to them all—to you all—readers, contributors, and staff.

Editing this JOURNAL is a labor of love, and goes a long way toward keeping me happy. Superficially viewed, it does little toward the other two—well and prosperous. But when looked at a little more closely, I suspect the superficial view may not be the correct one.

To be prosperous, one must stay busy—or most of us must, and the habit of staying busy is necessary to being gainfully occupied. There are also other aspects than material to being prosperous. As to staying well, the most useful weapon in fighting off illness and old age, I am persuaded, is to be occupied in useful pursuits, and if they are pleasant, so much the better. So viewed in this way, being JOURNAL editor helps keep me well and prosperous, as well as happy.

I also trust that the New Year finds you joyous. Now that may appear redundant, as I have already wished you happiness, yet it is not. Although the two have much in common, happiness and joyousness are not the same. Happiness is dependent, at least to a large extent, on external circumstances. Joyousness is of the inner man. The angels that first Christmas brought glad tidings of great joy to a people who were scarcely in a position to be very happy. Moses, unhappy at not being allowed by God to enter the Promised Land, was nevertheless joyous that God spoke to him at all. Daniel in Persia, who survived, and the early Christians in Rome, who did not, were all joyous as they were thrown to the lions, a situation calculated to make them anything but happy. They were at peace knowing they were kept by God, and they were joyous in their relation to Him. I know of no other source of real joy, or of peace, either, which, like joy, is of the inner man, soul, or spirit, as you please.

So, for 1982, I wish for you health, prosperity, and happiness. But more important, I pray you will have joy and peace.

J.B.T.

Elegy for a Mind

One morning about 30 years go a puckish young man walked for the first time into the pathology classroom of Vanderbilt Medical School, looking scarcely old enough to be out of rompers. Indeed, even when he was a resident he was required on several occasions to produce evidence he was over 18. He turned out to have one of the quickest minds of anyone I ever knew. He had wide interests and encyclopedic knowledge, and could have graced any field of endeavor he chose, medical or otherwise. He chose pathology, and later became an accomplished electron microscopist. All of us, his teachers, colleagues, and classmates, stood in awe of his mind. Now it is gone, and as the story of the murder and sordid life of its owner has unfolded across volumes of newsprint over the last few months, those of us who knew him and were closely associated with him during his early years again stood in awe, this time at the depths to which such a brilliant mind can sink.

As this piece is about a mind, and not about a man, the man shall remain nameless. Too much has been written about him already. Those who knew him will have recognized him by now; to those who did not, his name will not matter. What does matter is the loss of such intellect. The world can ill afford to lose its productivity, and even less to have to cope with the results of its misdirection. The natural question is: What went wrong? Was the mind warped from the beginning, or could it have been salvaged? Surely there must be a lesson to be learned from this story that will help in the care and feeding of young minds, that can redirect them to produce from such intellect an Einstein or a Mozart, and not have even one sink into depraved oblivion.

This is an elegy, which is a song of mourning. It gives—indeed requires—no answer. The public has been caught up in the lurid details of a sordid life; they have been titillated and entertained. His associates and onetime friends mourn the passing of the man they knew and loved, but this passing occurred many years before the body died. That was the time when the mind died, and that is the time to which this elegy is directed.

As with all medical conditions, the important questions for us as physicians are: When did the mind die, what did it die of, could it have been cured, and if so, why was it not?

J.B.T.



Pharmacists Request One Prescription Per Blank

(The following letter, addressed to the Nashville Academy of Medicine from the Middle Tennessee Society of Pharmacists—is being published in the JOURNAL at the direction of the TMA Board of Trustees.—ED)

Recently the members of this organization have brought to the board of directors a problem that should be addressed through the cooperative efforts of both the Nashville Academy of Medicine and this Society. I'm referring to the practice of writing more than one prescription on a blank. We would like to request your help in eliminating this problem which is a contributing factor in some dispensing errors. We are sure that some physicians feel that it is a harmless, time-saving action, however:

1. It is very easy for a pharmacist to accidentally type the directions for one drug on the label for another drug(s) on the blank. We are very much aware that it is 100% our responsibility to see that this doesn't happen, but human errors do occur.
2. Often the writing is very small and/or so cluttered that it is difficult or impossible to read. This requires us to contact you, which becomes an inconvenience for you, us and your patient.
3. Schedule drugs are often included with non-scheduled drugs. This makes a separate filing impossible unless the prescription is recopied. Again, there is a chance for an error.
4. Some physicians write multiple prescriptions on one blank and advise the patient to get all but one or two prescriptions filled. This imposes difficult filing and recordkeeping problems upon the pharmacist, especially when some of the drugs are controlled substances.
5. Some patients are surprised that they have more than one prescription written on a blank, resulting in the pharmacist taking time to explain why they are charged for more than one. This is not a condition for error but a problem that is disturbing to the pharmacist and patient.

We realize that there are far more physicians who do not utilize this practice than do, but we feel that the problem is serious enough that our two organizations should be able to communicate the problem to the benefit of all. I hope you will receive this request in the same spirit with which it is made. It is made with the safety and best interest of the patient in mind. We would be most happy to have representatives of this organization meet with representatives of the Academy in addressing this problem. We also feel

that at this time we should send a copy of this letter to the list of physicians that are writing multiple prescriptions on one blank.

May I thank you in advance for your cooperation, and I look forward to hearing from you in the near future.

Nola Weathers
President, Middle Tennessee
Society of Pharmacists



Samuel Clark Fain, Sr., age 79. Died October 30, 1981. Graduate of University of Tennessee College of Medicine. Member of Lakeway County Medical Society.

Walter H. Henley, age 55. Died November 26, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

FRANKLIN COUNTY MEDICAL SOCIETY

M. David Stockton, M.D., Sewanee

HENRY COUNTY MEDICAL SOCIETY

Robert T. Paschall, M.D., Paris

NASHVILLE ACADEMY OF MEDICINE

Dean E. Brenner, M.D., Nashville

Donald Bruce, M.D., Murfreesboro

William D. Brotherton, III, M.D., Nashville

George F. Gray, Jr., M.D., Nashville

John D. Hainsworth, M.D., Nashville

Phillip R. Jones, M.D., Nashville

G. Patrick Maxwell, M.D., Nashville

Thomas B. Miller, M.D., Madison

Alan J. Nissen, M.D., Nashville

Lonnie S. Poliner (student), Nashville

Alvin R. Singh, M.D., Murfreesboro

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Phillip J. Hinton, M.D., Johnson City

Franklin Montenegro, M.D., Johnson City

TMA Members Receive AMA Physician's Recognition Award

Nineteen TMA members qualified for the AMA Physician's Recognition Award during October, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Ronald B. Addlestone, M.D., Nashville
Erman D. Allen, M.D., White Pine
Hugh G. Barnett, II, M.D., Jackson
Archer W. Bishop, Jr., M.D., Knoxville
Benjamin F. Byrd, M.D., Nashville
Horace B. Cupp, Jr., M.D., Johnson City
Doran D. Edwards, M.D., Nashville
George S. Flinn, Jr., M.D., Memphis
Mellon A. Fry, Jr., M.D., Knoxville
Carl W. Huff, M.D., Memphis
C. Burton Keppler, M.D., Kingsport
Harry L. Peeler, M.D., Selmer
Carl W. Rogers, M.D., Lebanon
N. N. Sharma, M.D., Lewisburg
Carson E. Taylor, M.D., Lawrenceburg
William R. Thompson, M.D., Nashville
John E. VanHooydonk, M.D., Nashville
Frances C. Walker, M.D., Memphis
Thomas W. Williams, M.D., Etowah

personal news

Vaughn N. Barnard, Jr., M.D., Cookeville, has been initiated as a Fellow of the American College of Surgeons.

Fred M. Furr, M.D., Concord, has been elected president-elect of the American Society of Bariatric Physicians.

H. Edward Garrett, M.D., Memphis, has assumed the role of president of the Society for Vascular Surgery.

James M. Hudgins, M.D., Madison, has been named Family Physician of the Year by the Tennessee Academy of Family Physicians in recognition of "outstanding medical and civic contributions to the community."

Nat E. Hyder, Jr., M.D., Johnson City, who is a Colonel in the U.S. Army Reserve, has been named by the AMA to a special ad hoc Physician Advisory Panel to the Department of Defense (DOD) to assist in preparation of reference documents for assuring the

nation's medical preparedness in the event of a national emergency. This particular panel grew out of a contract between the AMA and the DOD to develop a set of physician-directed treatments for overseas U.S. military personnel who might arrive as casualties for treatment in continental U.S. hospitals.

Louis A. Killeffer, M.D., Harriman, received a "Golden Graduate" award during the University of Tennessee College of Medicine's Alumni Weekend in Memphis.

Hasmukh D. Patel, M.D., has been elected president of the medical staff at Gibson General Hospital in Trenton. Other officers elected include *Floyd Reed, M.D.*, vice president; and *Susan Cherpak, M.D.*, secretary.

John J. Shea, Jr., M.D., Memphis, has received the National Jewish Hospital-National Asthma Center Humanitarian Award.

Thomas A. Smith, M.D., Winchester, has been certified as a Diplomate of the American Board of Family Practice.

Robert Tooms, M.D., recently took over the office of president of the medical staff of Baptist Hospital in Memphis. Other officers elected include *Herbert A. Taylor, III, M.D.*, president-elect; and *Rodney G. Elliott, M.D.*, secretary.

Milton G. Yoder, M.D., Knoxville, has been elected president of the Tennessee Academy of Otolaryngology and Head and Neck Surgery. *John Jernigan, M.D.*, Oak Ridge, was elected secretary-treasurer for the group.

The following TMA members have been named to positions by the American Medical Association Board of Trustees: *William H. Hartmann, M.D.*, Nashville, is a member of the Residency Review Committee for Pathology. *John B. Thomison, M.D.*, Nashville, is a member of the Continuing Medical Education Advisory Committee.

The following TMA members have been initiated as Fellows of the American Academy of Family Physicians: *Edward P. Caldwell, M.D.*, Memphis; *Robert R. Casey, M.D.*, Sweetwater; *Daniel B. Drinnen, M.D.*, Dickson; *Veena K. Gupta, M.D.*, Hendersonville; *James D. Rucker, M.D.*, Memphis; *John L. Sonner, II, M.D.*, Sevierville; *Ronald G. Twilla, M.D.*, Milan.

The following TMA members have been honored for 25 or more years of membership in the American Academy of Family Physicians:

Lee A. Absher, M.D., Knoxville; *Oliver K. Agee, M.D.*, Maryville; *Erman D. Allen, M.D.*, White Pine; *John L. Armstrong, M.D.*, Somerville; *J. Kelley Avery, M.D.*, Union City; *Robert F. Baker, M.D.*, Sparta; *Thomas K. Ballard, M.D.*, Jackson; *Spencer Y. Bell, M.D.*, Knoxville; *Basil A. Bland, Jr., M.D.*, Memphis; *Robert L. Bourland, M.D.*, Memphis;

James T. Bridges, M.D., Memphis; *Isaac D. Brown, M.D.*, Mosheim; *Thornton E. Bryan, Jr., M.D.*, Memphis; *William A. Bryant, M.D.*, Woodbury; *John H. Burkhart, M.D.*, Knoxville; *Charles C. Chitwood, Jr., M.D.*, Lafayette; *Warner L. Clark, M.D.*, Church Hill; *Malcolm F. Cobb, M.D.*, Concord; *Frank H. Collins, M.D.*, Memphis; *James H. Collins, M.D.*, Memphis; *Thomas G. Cranwell, M.D.*, Pikeville; *Jesse P. Cullum, M.D.*, Knoxville; *Philip V. Daugherty, M.D.*, Nashville; *Matthew L. Davis, M.D.*, LaFollette; *James T. DeBerry, M.D.*, Cookeville; *Parley M. Dings, M.D.*, Clinton; *John B. Dorian, M.D.*, Memphis; *Raphael H. Duncan, Jr., M.D.*, Concord; *Robert H. Elder, M.D.*, Cedar Hill; *Paul A. Ervin, Jr., M.D.*, Crossville; *Frank A. Faulkner, M.D.*, Knoxville; *James O. Fields, M.D.*, Milan; *Augustus C. Ford, M.D.*, Chattanooga; *Byron W. Frizzell, M.D.*, Johnson City; *Eugene W. Gadberry, M.D.*, Memphis; *Bayard D. Goodge, M.D.*, Concord; *Robert H. Harvey, M.D.*, Erwin; *James B. Havron, M.D.*, S. Pittsburg; *William L. Headrick, Jr., M.D.*, S. Pittsburg; *C. Hal Henard, M.D.*, Greeneville; *Joseph S. Henderson, Jr., M.D.*, Alcoa; *Irving R. Hillard, M.D.*, Nashville; *O. Reed Hill, M.D.*, Orlando, FL; *James E. Holmes, M.D.*, Memphis; *Halden W. Hooper, M.D.*, Gallatin; *Nathan P. Horner, M.D.*, Greeneville; *Fred E. Hufstедler, M.D.*, Knoxville; *Nat E. Hyder, Jr., M.D.*, Johnson City; *Joe H. Ijams, M.D.*, Memphis; *James T. Jackson, M.D.*, Dickson; *John O. Kennedy, M.D.*, Knoxville; *Louis A. Killeffer, M.D.*, Harriman; *Manly F. Langston, M.D.*, Signal Mountain; *Robert F. Lash, M.D.*, Knoxville; *John H. Leshner, M.D.*, Knoxville; *Telford A. Lowry, M.D.*, Sweetwater; *John F. Manning, M.D.*, Maryville; *Haskell B. McCollum, M.D.*, Greeneville; *John L. McGee, Jr., M.D.*, Memphis; *Frank S. McKnight, M.D.*, Somerville; *Ray W. Mettetal, M.D.*, Johnson City; *Irving C. Minkin, M.D.*, Memphis; *John T. Moore, Jr., M.D.*, Algood; *James A. Moore, M.D.*, Memphis; *James N. Moore, M.D.*, White House; *John D. Moore, M.D.*, Knoxville; *Patrick J. Murphy, M.D.*, Memphis; *Marvin M. Nathan, M.D.*, Chattanooga; *Denton D. Norris, M.D.*, Livingston; *Harry K. Ogden, M.D.*, Knoxville; *Homer C. Ogle, M.D.*, Knoxville; *William J. Oswald, M.D.*, Memphis; *William K. Owen, M.D.*, Pulaski; *Francis H. Payne, M.D.*, Knoxville; *Kenneth J. Phelps, Sr., M.D.*, Lewisburg; *Nathan F. Porter, M.D.*, Greenfield; *Thomas R. Puryear, M.D.*, Lebanon; *Warren C. Ramer, M.D.*, Lexington; *Joseph L. Raulston, M.D.*, Knoxville; *Edward B. Rhea, M.D.*, Old Hickory; *Charles L. Roach, M.D.*, Sevierville; *James S. Ruffin, Jr., M.D.*, Covington; *Lee Rush, Jr., M.D.*, Somerville; *Eugene M. Ryan, M.D.*, S. Pittsburg; *John H. Saffold, M.D.*, Knoxville; *Lee J. Seargeant, Jr., M.D.*, LaFollette; *Thurman Shipley, M.D.*, Cookeville; *William G. Shull, M.D.*, Whitwell; *Archibald Y. Smith, III, M.D.*, Signal Mountain; *Joseph R. Smith, M.D.*, Paris; *Lyle R. Smith, M.D.*, Kingsport; *William N. Smith, M.D.*, New Tazewell; *David E. Stewart, M.D.*, Brownsville; *Viston Taylor, Jr., M.D.*, S. Pittsburg; *Carson E. Taylor, M.D.*, Lawrenceburg; *William S. Taylor, M.D.*, Cookeville; *John C. Thornton, Jr., M.D.*, Brownsville; *Gordon H. Turner, Jr., M.D.*, Linden; *Charles T. R. Underwood, M.D.*,

Johnson City; *James VanBlaricum, M.D.*, Winchester; *H. Trent Vandergriff, M.D.*, Maryville; *Jesse L. Walker, M.D.*, Jellico; *Roland M. Webster, M.D.*, Strawberry Plains; *Roy A. Wedekind, Jr., M.D.*, Knoxville; *Sandford L. Weiler, M.D.*, Chattanooga; *Samuel I. Wener, M.D.*, Memphis; *Vernon E. Wilson, M.D.*, Nashville; *Wendell W. Wilson, M.D.*, Old Hickory; *John H. Wolaver, M.D.*, Knoxville; *Mose C. Woodfin, M.D.*, Nashville.

announcements

CALENDAR OF MEETINGS

NATIONAL

Feb. 3-7 American College of Psychiatrists—Hyatt House, Orlando
 Feb. 14-17 North American Medical/Dental Association Symposium, Wildwood Inn, Snowmass, Colo.
 Feb. 14-18 American Society of Neuroimaging—Hotel Cerromar, Dorado Beach, Puerto Rico
 Feb. 21-25 North American Medical/Dental Association Conference—Wildwood Inn, Snowmass, Colo.

Feb. 25-27

March 1-5

March 3-6

March 3-8

March 5-10

March 7-12

March 14-20

March 14-20

March 15-19

March 15-19

March 17-20

March 17-20

March 17-22

March 25-28

March 30-

April 3

American Psychopathological Association—Grand Hyatt Hotel, New York City
 International Academy of Pathology, U.S.-Canadian Division—Sheraton Boston
 American Association of Genitourinary Surgeons—Canyon Hotel, Palm Springs, Calif.

International Conference of the Association for Children and Adults With Learning Disabilities—Conrad Hilton, Chicago

American Society of Abdominal Surgeons—Caesar's Palace, Las Vegas

American Society for Microbiology—Atlanta

American Society of Contemporary Medicine and Surgery—Diplomat, Hollywood, Fla.

American Society of Contemporary Ophthalmology—Diplomat, Hollywood, Fla.

American Burn Association—New Orleans
 National Conference on Breast Cancer (sponsored by American College of Radiology)—Hyatt Regency Hotel, New Orleans

American Society for Clinical Pharmacology and Therapeutics—Contemporary Hotel, Lake Buena Vista, Fla.

Neurosurgical Society of America—Marco Island, Fla.

American Society of Regional Anesthesia—Hyatt Hotel, Monterey, Calif.

American Psychosomatic Society—Brown Palace, Denver

American Medical Electroencephalographic Association, LaFonda, Santa Fe, N.M.

Leo N. Levi National Arthritis Hospital

Dedicated to the Treatment of Arthritis and Related Disease



Fred Robertson, M.D.
 Medical Director

Diplomate, American Board
 of Internal Medicine
 Subspecialty of Rheumatology

For Information Call: (501) 624-1281

Or Write: P.O. Box 850
 Hot Springs, Arkansas 71901

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, Jr., M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

Feb. 19	Annual L. W. Edwards Lecture in Surgery (1 hour)
March 20-27	Current Issues in Obstetrical and Perinatal Medicine (Caribbean Cruise out of Miami)
April 1-2	Principles of Cardiovascular Risk Management (14 hours)
April 10-16	Annual James C. Overall Visiting Professor in Pediatrics (16 hours)
April 15	Annual Frank H. Luton Lecture in Psychiatry (1 hour)
April 30	Annual Barney Brooks Lecture in Surgery (1 hour)
April 30-May 1	Southern Society of Clinical Surgeons and the H. Wm. Scott Society, Scientific Sessions
May 19-20	21st Annual Seminar in Psychiatry (for nonpsychiatrists) (11 hours)
May 28-29	Annual Medical Alumni Reunion, Scientific Sessions
July 7-10	Vanderbilt/Bowman Gray Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July 27-31	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)

For information contact Division of Continuing Medical Education, Vanderbilt University School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.

Dermatology.....	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology.....	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Doolcy, M.D.
Pathology.....	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics.....	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular.....	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology.....	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K) and (M) indicate the continuing education unit handling the arrangements for a particular program.

Feb. 1-3	(K)	Emergency Medicine Symposium
Feb. 6-13	(K)	4th Annual KAM Education Ski Meeting
March 14-19	(M)	15th Annual Family Practice Review Course
April 5-7	(K)	Hypertension
June 10-12	(K)	ENT and Otolaryngology

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.
Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.
Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

BAPTIST MEMORIAL HOSPITAL

Feb. 6	Loss Prevention
March 4-6	The Hypothalamus in Health and Disease: Reproduction, Growth, Feeding, and Behavior
March 26-27	Psychiatry for the Primary Care Physician
April 30-May 1	Current Controversies in Chron's Disease
May 6-8	Gynecological Surgery
May 21-22	Hypertension: 1982

For information contact Educational Support Services, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

UNIVERSITY OF MISSISSIPPI

March 11-13	9th Annual Surgical Forum—Holiday Inn Downtown, Jackson, Miss. <i>Credit:</i> 17 hours AMA Category 1. <i>Fee:</i> \$250.
-------------	---

For information contact Continuing Education, University of Mississippi Medical Center, 2500 N. State St., Jackson, MS 39216, Tel. (601) 987-4914.

MEDICAL COLLEGE OF VIRGINIA

- April 22-24 Pediatric Springfest—The Williamsburg Hospitality House, Williamsburg, Va.
April 23-25 Emergency Medicine for the Primary Care Physician—Fort Magruder Conference Center, Williamsburg, Va.

For information contact Kathy E. Johnson, Box 48, MCV Station, Richmond, VA 23298, Tel. (804) 786-0494.

INT'L. MEDICAL EDUCATION CORP.

- EKG Interpretation and Arrhythmia Management
April 16-18 Holiday Inn, Williamsburg, Va.
Aug. 13-14 Hyatt Regency, Nashville
Aug. 13-15 Hilton Head Hyatt, Hilton Head, S.C.
Clinical Management of Coronary Disease and Exercise Testing
July 30-Aug. 1 Lodge of Four Seasons, Lake of Ozarks, Mo.
Arrhythmias and Cardiac Ischemia: Diagnosis and Management
April 23-24 Peachtree Plaza, Atlanta
June 11-13 Holiday Inn on Ocean, Virginia Beach, Va.
Cardiac Rehabilitation
May 14-15 Sheraton Hotel, St. Louis

For information and complete course schedule contact Division of Postgraduate Education, International Medical Education Corporation, 64 Inverness Drive East, Englewood, CO 80112, Tel. (800) 525-8561.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

- March 2-5 Emergency Medicine/Trauma—Tamarron Resort, Durango, Colo.
July 26-28 Pediatric Update 1982—Kiawah Island, S.C.
Aug. 2-6 Taxes and Investments—Hilton Head Island, S.C.
Aug. 9-11 High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

NORTHWESTERN UNIVERSITY

- March 8-12 Sports Medicine Postgraduate Course—Maui, Hawaii. *Credit:* 25 hours AMA Category 1.

For information contact Bates Noble, M.D., Northwestern University Center for Sports Medicine, 303 E. Chicago Ave., Chicago, IL 60611.

BE THE DOCTOR YOU WANT TO BE. IN THE NAVY.

The Navy is seeking physicians who want an alternative to the administrative burden and expense of private practice. Our modern medical facilities provide the latest techniques and equipment. Opportunities exist to do research on projects both exciting and clinically meaningful, including aerospace and submarine medicine, underwater physiology and environmental and preventive medicine. Professional allowances in addition to competitive salaries. Non-taxable quarters and subsistence allowances. Thirty days' paid vacation earned each year. Insurance, medical, dental package.

For more information, contact:

Mike Maher
Medical Program Recruiter
Navy Recruiting District Nashville
1808 West End Ave. • Nashville, TN 37203
In Nashville (615) 251-5571
In Tennessee (800) 342-8629

VALLEY PSYCHIATRIC HOSPITAL

... means excellence in quality care.

Valley is a fully accredited private psychiatric hospital staffed by professionals with outstanding credentials in the field of mental health and emotional disorders.

The carefully coordinated team approach includes intensive individual and group psychotherapy, and expressive therapy for the patient whose condition requires evaluation and professional treatment.

Valley is a 100-bed private psychiatric hospital nestled in an 81-acre wooded area on the outskirts of Chattanooga, Tenn. Structured clinical programs include:

ADULT PSYCHIATRIC PROGRAM—Admission to the adult program at Valley involves diagnostic procedures such as complete physical examination, psychological testing, psychiatric evaluation and review of social history. Based upon results of these initial tests, the patient's attending psychiatrist together with members of the psychiatric treatment team develop a total treatment plan which may include group therapy in addition to individual therapy, occupational and recreational therapy as well as family involvement.

Weekly meetings of the treatment team are held to modify the original treatment plan based on the patient's progress while in the hospital.

CHILD AND ADOLESCENT PROGRAM—Valley maintains a child and adolescent program for youngsters undergoing specific difficulties in growth and development. This program provides individual as well as group therapy and includes activities in art, sports and field trips of special interest to this age group.

An active school experience is part of this program. Individual lesson plans, administered by special education teachers and worked out with the children's own school district educators, keep

them from falling behind peers in their own community school. Because the student is allowed to move at his own pace in an individualized program, he develops confidence and self-discipline.

The Valley program regards adolescence as a psychological growth process—not a disease—so that time, skill and experience are critical ingredients of the treatment.

SUBSTANCE ABUSE PROGRAM—This treatment team is trained and experienced in the treatment of alcoholics and other drug-dependent persons.

A number of approaches are used in the treatment of alcoholism and/or drug abuse: individual and group therapy, substance abuse counseling, lectures, communication skills training, pastoral counseling, physical and recreational therapy, the 12 Steps of Alcoholics Anonymous, Antabuse therapy, and various forms of adjunctive therapy. Whenever possible, family members are urged to become involved in the patient's treatment through out-patient family and individual counseling.

REFERRAL—Valley maintains a 24-hour, seven-day-a-week emergency referral service. Referrals are accepted from psychiatrists and other physicians, the clergy, social workers, mental health professionals, social agencies, self and family.

Valley is fully accredited by the Joint Commission on the Accreditation of Hospitals.

Robert G. Aug, M.D., Medical Director
Susan McGuire, M.D., Medical Director,
Child and Adolescent Program

Carroll J. Carter, A.C.S.W., Director,
Substance Abuse Treatment Program

VALLEY PSYCHIATRIC HOSPITAL

P.O. BOX 21373 • SHALLOWFORD ROAD

CHATTANOOGA, TN 37421

(615) 894-4220

Vitamin E Found Helpful In Noncancerous Breast Lumps

Noncancerous lumpy breast tissue plagues up to 20% of American women, and women with at least some types of fibrocystic breast disease are thought to be at a twofold to eightfold greater risk of developing breast cancer. Even those whose lumps remain benign often experience extreme discomfort. Breasts ache and become quite tender.

In a recent study from Baltimore's Sinai Hospital and The Johns Hopkins University School of Medicine, 26 patients were treated with vitamin E. Ten responded well, 12 recorded fair response and the others did not respond. Good response meant that the lumps went away, along with the discomfort.

Current findings suggest that physicians try prescribing vitamin E for their patients with cystic breast disease. It worked in a high percentage of patients and no side effects were noted.

Coronary Deaths During Exercise Occur in Those Already Impaired

Tales of middle-aged men who died during strenuous exercise are frequent enough to offer many individuals an excuse for avoiding exercise altogether.

But men who die on the tennis court or the jogging track almost invariably already had serious heart disease, says the Institute for Aerobics Research, an exercise center in Dallas, which kept records for more than five years on almost 3,000 adults in an effort to determine whether exercise causes heart attacks.

There were only two heart attacks during exercise and no deaths during the study. Both men survived and were again exercising regularly.

Other studies found that of 63 cases of sudden death associated with physical exercise, in no instance could death be regarded as due to the effects of extreme exertion on a previously healthy heart. It is the combination of exercise and disease together that carries the major risk.

The conclusion is that there is a small, but not negligible, risk of heart attack for adults participating in vigorous exercise. But factors such as heart disease, competition, regularity of exercise and smoking may modify the risk.

Impotence May Be Symptom Of Undiscovered Diabetes

Some 12% of men troubled with sexual impotence were found to have previously undiagnosed diabetes in a study conducted at Queens Hospital Center, Jamaica, N.Y. As many as 50% of men with diabetes complained of impaired sexual function. Of 58 men with sexual impotence 12% had cases of diabetes that had not been discovered by standard tests.

When a man complains of impotence, diabetes must be considered as a possible cause.

New Treatment Era Seen For Menstrual Pain

New medications for menstrual cramps are highly effective in relieving the pain that often accompanies the menstrual period. For decades, an accepted approach to dysmenorrhea has been minor tranquilizers, mild pain relievers, and an automatic diagnosis of "psychogenic" pain. Psychological factors may be strong in some cases of menstrual pain, but in many there are bodily changes causing the cramps, changes that can be offset by medications.

Menstrual pain is a complex process, but an important factor is a high bodily production of prostaglandins during menstruation. The new medications reduce the excess prostaglandin production, and thus relieve pain. Prostaglandin inhibitors are effective for relieving pain of dysmenorrhea in 65% to 100% of patients, says a study from Cornell University Medical College. But the prostaglandins represent a "shot-gun" approach to the problem, and more selective drugs are sought for use in the future.

RENT MY CONDOMINIUM AT HILTON HEAD ISLAND SOUTH CAROLINA

For more information contact:

Tom Reed

Attention: Mrs. Parton

117 East Main Street

Murfreesboro, Tennessee 37130

Telephone: (615) 890-6464

**INTERNIST
OBSTETRICIAN-GYNECOLOGIST
FAMILY PRACTITIONER
GENERAL SURGEON**

Expanding prepaid multispecialty group practice for openings in July, 1982. Board certified or eligible physicians. Competitive salaries, excellent fringe benefits and continuing education opportunities. Apply to Joseph A. Rothschild, M.D., Medical Director, HEALTH FIRST, 6445 Poplar Ave., Memphis, TN 38119, phone (901) 767-0850.

FAMILY PHYSICIAN NEEDED

Family Physician to join two-man family practice next door to 300-bed hospital. Excellent privileges. Salary guaranteed with fringes and incentives. Partnership at end of second year.

Contact E. P. Dickerson, M.D., Westside Family Physicians, Suite 5500, 2010 59th Street West, Bradenton, Florida 33529, Telephone (813) 792-2211.

OB-GYN DIRECTOR NEEDED

Opening for Director of Residency Training Program in Obstetrics and Gynecology with the Pensacola Educational Program, Pensacola, Florida, for Board Certified physician. Total program of 60 residents in six different residencies (ten residents in four-year Ob-Gyn Program) associated with four different hospitals in community-based educational program. Salary competitive with excellent fringe benefits of paid vacation, liability insurance, health/disability insurance, paid educational and professional trips. Program affiliation with several large medical schools. Gulf Coast living at its best, and health care in immediate area of over 1/4 million.

If interested in teaching and patient care, call collect: Dr. R. D. Nauman, Director of Medical Education, 904/477-4956, or send curriculum vitae to Director of Medical Education, Pensacola Educational Program, 5149 North 9th Avenue, Suite 307, Pensacola, Florida 32504.

CARE FOR YOUR COUNTRY.

ADD IT UP:

**BEST CARE EQUALS (A
USAR
MEDICAL
UNIT) PLUS (YOU)**



You will work on medical projects right in your community. In return, you will complement your career by working and consulting with top physicians during monthly Reserve meetings and medical conferences. You will enjoy the benefits of officer status, including a non-contributory retirement annuity when you retire from the Army Reserve, as well as funded continuing medical education programs. A small investment of your time is all it takes to make a valuable medical contribution to your community and country.

**Call: MAJ. D. M. WATT
(901) 386-6836**

**Write: 3606 AUSTIN PEAY
MEMPHIS, TN 38128**

Tennessee Medical Association

ANNUAL MEETING

April 14-17, 1982

Hyatt Regency Hotel
Memphis, Tennessee

SCHEDULE OF CME SESSIONS AND TMA MEETINGS

WEDNESDAY, APRIL 14

TMA House of Delegates

- 1:00 p.m. Delegates Orientation
- 3:00 p.m. First Session
- 6:00 p.m. Delegates/Exhibitors Reception

TMA Auxiliary

- 7:30 p.m. Executive Committee
- 8:00 p.m. Finance Committee

THURSDAY, APRIL 15

TMA Past Presidents Breakfast

- 8:00 a.m. Parlor 108-109

TMA House of Delegates

- 9:00 a.m. Reference Committees

Neurosurgery

- 1:00 p.m. Business/Scientific

Ophthalmology

- 10:00 a.m. Board Meeting
- 12:00 Noon Luncheon
- 1:00 p.m. Scientific

Orthopedic

- 8:30 a.m. Scientific
- 12:00 Noon Luncheon
- 2:00 p.m. Scientific
- 7:00 p.m. Reception/Banquet

Pediatric

- 4:00 p.m. Council Meeting

Plastic Surgery

- 7:30 a.m. Breakfast
- 9:00 a.m. Scientific

Psychiatry

- 8:30 a.m. Scientific
- 12:00 Noon Luncheon
- 1:00 p.m. Scientific
- 6:00 p.m. Social/Banquet

Public Health Officers Assoc.

- 1:00 p.m. Scientific
- 5:00 p.m. Reception

Surgery

- 12:00 Noon Luncheon/Business
- 2:00 p.m. Scientific
- 4:30 p.m. Business
- 7:00 p.m. Reception/Banquet

FRIDAY, APRIL 16

Tennessee Medical Association

- 12:00 Noon IMPACT Luncheon
- 6:30 p.m. President's Reception/Banquet

Child Psychiatry

- 11:30 a.m. Lunch and Tour
- 1:30 p.m. Scientific

College of Emergency Physicians

- 9:00 a.m. Scientific
- 12:00 Noon Luncheon

Dermatology

- 3:00 p.m. Registration—
at Peabody Hotel

Family Physicians

- 8:30 a.m. Scientific

Gastrointestinal Endoscopy

- 1:00 p.m. Scientific

Internal Medicine

- 9:00 a.m. Council Meeting
- 3:00 p.m. Scientific

Long Term Care

- 1:00 p.m. Scientific

Neurology

- 1:00 p.m. Business/Scientific

Obstetrics/Gynecology

- 1:30 p.m. Scientific
- 3:45 p.m. Business

Ophthalmology

- 10:00 a.m. Business
- 1:10 p.m. Scientific

Ophthalmic Assistants

- 8:30 a.m. Scientific
- 12:00 Noon Luncheon
- 1:30 p.m. Scientific

Orthopedic

- 8:30 a.m. Scientific
- 1:00 p.m. Scientific

Pathology

- 1:00 p.m. Scientific—at Baptist
Memorial Hospital-East

Pediatrics

- 8:30 a.m. Scientific
- 1:30 p.m. Scientific

Psychiatric

- 8:00 a.m. Business

Thoracic

- 1:00 p.m. Scientific

Urology

- 1:00 p.m. Scientific
- 3:00 p.m. Business

SATURDAY, APRIL 17

Tennessee Medical Association

- 7:00 a.m. Medicine and Religion
Breakfast
- 9:00 a.m. House of Delegates
Second Session

Allergy and Immunology

- 12:00 Noon Luncheon
- 1:00 p.m. Scientific
- 3:30 p.m. Business

Anesthesiology

- 7:00 a.m. Breakfast
- 9:00 a.m. Business
- 10:00 a.m. Scientific
- 6:30 p.m. Social/Dinner—
at Benihana of Tokyo

Child Psychiatry

- 9:00 a.m. Scientific

Dermatology

- 7:30 a.m. Breakfast/Registration—
at Peabody Hotel
- 9:00 a.m. Scientific—
at UT Center for
Health Sciences
- 6:30 p.m. Cocktails/Dinner—
at Peabody Hotel

Pathology

- 8:30 a.m. Scientific—
at Baptist Memorial
Hospital-East
- 12:00 Noon Luncheon
- 1:30 p.m. Business

Radiology

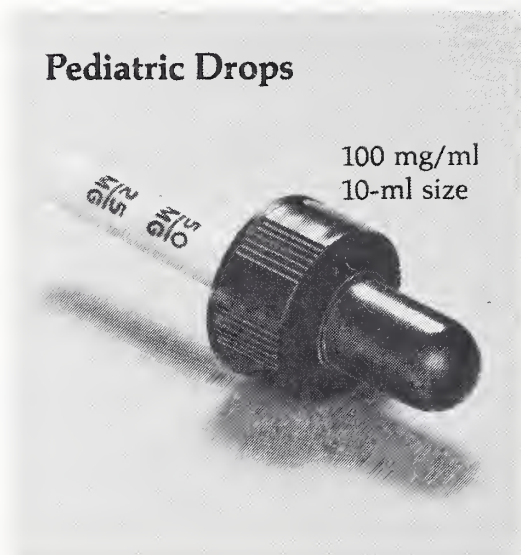
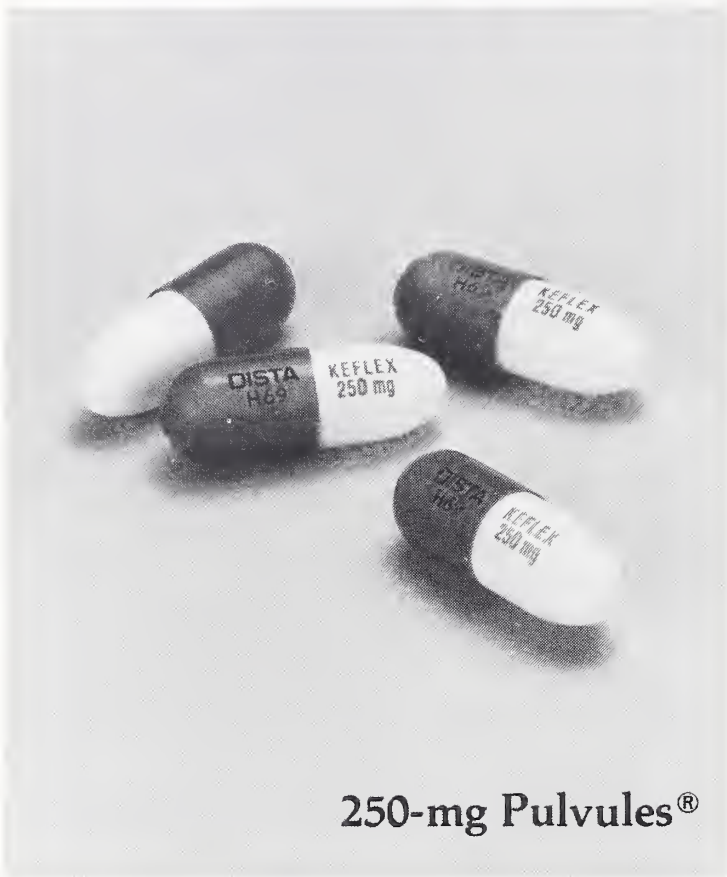
- 12:00 Noon Luncheon
- 12:30 p.m. Scientific
- 2:30 p.m. Business

SUNDAY, APRIL 18

Dermatology

- 8:00 a.m. Breakfast—
at Peabody Hotel
- 8:30 a.m. Scientific—
at Peabody Hotel
- 11:45 a.m. Business

easy to take



Keflex®

cephalexin

Additional information available
to the profession on request.



Dista Products Company
Division of Eli Lilly and Company
Indianapolis, Indiana 46285
Mfd. by Eli Lilly Industries, Inc.
Carolina, Puerto Rico 00630

Ectopic Pregnancy Revisited

I. RAY KING, M.D.

Introduction

In a previous publication in 1978, King, Myers, and Semmer¹ recommended the use of the laparoscope in the diagnosis of unruptured ectopic pregnancy. Since that time, other diagnostic methods have become clinically available to evaluate a patient with a suspected ectopic pregnancy, namely serum pregnancy test and ultrasonography. Their use in suspected ectopic pregnancy will be described.

Case Material

Case No. 1: A 31-year-old gravida 7, para 4, abortus 3 was seen in the emergency room on March 11, 1981 with irregular minimal vaginal bleeding, mild lower abdominal pain, and mild nausea associated with one episode of vomiting. A urine pregnancy test was negative. Two days later when seen in my office she had continued mild lower abdominal pain and a tender fullness in the right adnexa. Blood was drawn for a serum pregnancy test and she returned to her work with instructions not to eat or drink any food. Approximately three hours later, when the pregnancy test was reported as being positive, she was called and admitted to the hospital. Later the same day, a diagnostic laparoscopy showed a left ampullary unruptured ectopic pregnancy with approximately 50 to 75 cc of blood in the pelvis. Laparotomy was carried out with a left salpingectomy and her recovery was uneventful.

Case No. 2: A 28-year-old gravida 2, para 1, ectopic 1 was seen on Oct. 9, 1978, six weeks after her last normal menstrual period. She had had a small amount of vaginal spotting, and a serum pregnancy test was positive. When an ultrasound scan failed to show an intrauterine gestational sac, she

was admitted to the hospital and a laparoscopy, done on Oct. 11, 1978, revealed an unruptured ampullary ectopic pregnancy in the left tube, and absence of the right tube due to previous ectopic pregnancy. At laparotomy the pregnancy was removed by a "milking" action on the tube toward the fimbriae, following which the tube was irrigated with saline until there was no more bleeding. Pathologic evaluation confirmed an ectopic pregnancy.

This patient's postoperative course was uneventful and she resumed efforts to achieve another pregnancy. After having a normal period on Dec. 7, 1978, she became amenorrheic and had a positive serum pregnancy test on Jan. 16, 1979. On Jan. 26, 1979, seven weeks from her last normal menses, an ultrasound examination showed an intrauterine gestational sac. An uneventful pregnancy ensued and she was delivered at 38 weeks by a repeat cesarean section.

Serum Pregnancy Test

Laboratory testing for pregnancy has come a long way from the bioassay with injection of urine into test animals followed by sacrifice of the animal to evaluate ovarian response. Modern serum pregnancy tests determine the presence of human chorionic gonadotrophin (HCG) at very low concentrations.² The HCG molecule is a glycoprotein made up of two polypeptide chains called α and β subunits. The α subunit is the same in luteinizing hormone (LH), follicle stimulating hormone (FSH), thyroid stimulating hormone (TSH) and HCG, whereas each of these hormones has a specific β subunit. The most accurate pregnancy test therefore would determine the presence of the β subunit of an HCG. This is the mechanism of a commercially available radioimmunoassay (RIA) kit that can determine the presence of HCG in very low serum concentrations and can detect a pregnancy by the

From the Department of Obstetrics and Gynecology, St. Mary's Medical Center, Knoxville.

Reprint requests to 939 Emerald Ave., Suite 901, Knoxville, TN 37917 (Dr. King).

end of its first week. The test requires less than three hours for completion. The other modern serum pregnancy test is a radio receptor assay (RRA) which can detect pregnancy by the first day of the first missed menstrual period. Whereas the RIA is selective for the β subunit of HCG, the RRA can be falsely positive with an elevated LH. The other structurally related hormones are not detected by the RRA. The RRA can be done in approximately one hour after collection of the blood specimen. While both of these tests are more expensive than the conventional urine pregnancy test, the accuracy is warranted in the suspected ectopic pregnancy. The only problem associated with obtaining these tests is that adequately trained laboratory personnel must be available to properly carry out the test and most hospitals will do the test only once a day unless specifically requested.

Ultrasonography

Diagnostic ultrasound can be used to detect an intrauterine pregnancy at about five to six weeks after the last normal menstrual period.³ This is seen as a rounded fluid-filled sac, the gestational sac, within the uterus. Combined intrauterine and ectopic pregnancies have occurred on rare occasions, estimated at one per 30,000 births.⁴ Therefore the presence of a gestational sac within the uterus would make the diagnosis of an ectopic pregnancy extremely unlikely. Although sonography can demonstrate cystic structures in the adnexa, they cannot be used for

the specific diagnosis of an early ectopic pregnancy since they could represent a functional or pathologic ovarian cyst or a hydrosalpinx.

Discussion

Our previous communication¹ on the use of the laparoscope in the diagnosis of unruptured ectopic pregnancies suggested that "in the clinical situation of amenorrhea followed by irregular or abnormal uterine bleeding accompanied by lower abdominal pain, the patient should be considered suspect for ectopic pregnancy." Laparoscopy was then suggested as a diagnostic measure. While this suggestion is still appropriate, I would suggest that the use of a modern serum pregnancy test and the diagnostic ultrasound would eliminate laparoscopy in those patients who have a less life-threatening problem. If the serum pregnancy test is negative or if the ultrasound shows an intrauterine gestational sac, I would suggest observation or evaluation for a condition other than ectopic pregnancy.

It should be understood that the proposed evaluation is not intended for the reproductive-age patient who presents with abdominal pain and hypovolemia. Since ectopic pregnancy is likely in such a patient, care should not be delayed.

REFERENCES

1. King IR, Myers JD, Semmer JR: Diagnosis of unruptured ectopic pregnancy by the use of the laparoscope. *J Tenn Med Assoc* 71:19, 1978.
2. Pelosi MA, Apuzzio J, Harrigan JT: What to expect from the new generation of pregnancy tests. *Contrib Gynec Obstet* 17:233, 1981.
3. Hobbins JC, Winsberg F: *Ultrasonography in Obstetrics and Gynecology*. Baltimore, The Williams and Wilkins Co, 1977, p 18.
4. Hellman LM, Pritchard JA: *Williams Obstetrics*. New York, Appleton-Century-Crofts, 1971, p 553.

APRIL 1982						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
			TMA 147th ANNUAL MEETING Hyatt Regency Hotel — Memphis			
18	19	20	21	22	23	24
25	26	27	28	29	30	

The Asklepion Club of Nashville

R. H. KAMPMEIER, M.D.



Introduction

A group of Nashville's physicians and surgeons banded together under the name of the Asklepion Club to act, in Osler's words, as "a school in which the scholars teach each other." They met weekly, except for the summer months, from 1907 to 1917, and possibly beyond. Apparently there was little if any general knowledge about this obviously viable club devoted to continuing education. Published historical material of that era makes no mention of the club, and conversations with the several physicians still living who practiced in Nashville in the teens of this century prompted no recollection of an Asklepion Club.

The spark which prompted me to pursue a search for the origins and life of the Asklepion Club was the gift of a bound notebook, a record of the club's minutes, by Dr. Adam G. N. Moore, of Boston, in March of last year. I received the gift for presentation to the History of Medicine Library of the Vanderbilt University School of Medicine.

The detailed minutes of the club entered into this notebook are in the beautiful handwriting of its secretary, A. G. Nichol, M.D., a Nashville pioneer in orthopedic surgery and grandfather of Dr. Moore who thus fell heir to this document. (Dr. Moore's father was Merrill Moore, M.D., Vanderbilt '29, a noted member of the group of authors known as the "Fugitives.") The reproduction of the title page of the minutes book

(Fig. 1) shows that it contains a record of the meetings from Dec. 14, 1914 to May 20, 1917.

Even though one may wish that other minutes books were at hand to tell the whole story of the Asklepion Club, the one book of minutes demands that this chapter in Nashville's medical history be recorded for posterity. This is doubly necessary since I find no public record concerning its existence. That it existed confirms one of the attributes of the medical profession which has lived throughout history since Hippocrates, whose oath contains the injunction, "to teach them [others] this Art if they shall wish to learn it, without fee or stipulation, and that by precept and lecture, and every other mode of instruction I will impart a knowledge of the Art. . . ." This inherent attribute of physicians is revealed on every page of this book of minutes.

It is essential to realize how limited the resources for continuing education were for these doctors. It was available only within the membership of "organized medicine"—the meetings of the Nashville Academy of Medicine, the annual meeting of the Tennessee Medical Association and its journal, and the American Medical Association and its *JAMA*. The freestanding Southern Medical Association was founded in 1906 in Chattanooga, and developed annual meetings and a journal. The first specialty organizations for practitioners were the American College of Surgeons and the American College of Physicians, established respectively in 1913 and 1915.

Lacking the first minutes book, I could only conjecture upon what impetus drew a group of Nashville doctors into an intimate relationship to teach each other. It is so suggestive of Oslerian philosophy and Osler's role in organizing several professional groups for self-education that I wondered whether its organization in 1907 might actually have represented the influence of Osler through one of his students, Dr. Clinton Brush, a centenarian and the only living member of the club. Graduating from Johns Hopkins in 1903, he served an internship under Osler followed by

ASKLEPION CLUB/Kampmeier

a year as assistant in medicine to help in teaching clinical microscopy. When I asked Dr. Brush if he had initiated the establishment of the club he smiled and said only, "I had my finger in the pie." In answer to my query of other fingers in the pie he promptly answered, Drs. Bloomstein, Nichol, Tigert and West.

At the bottom of the title page of the minutes book are written small cryptic numbers which I presume to refer to minutes books: "1907-8. 8-9-9-10-11-11.12-14-15-15-16-16-17-" A loose scrap of paper in the book carries the following:

1906-7 Wood	1912-13 Pollard
1907-8 Brower	1913-14 Gallagher
1908-9 King	1914-15 Tigert
1909-10 Oughterson	1915-16 Keller
1910-11 Tucker, McCampbell	1917-18 Tucker, R.O.
1911-12 Bloomstein	

No doubt this is the list of those who served as president. The minutes of each meeting are introduced with the sentence, "The meeting was called to order by the President," without mentioning his name with but one exception when "Dr. Tigert opened the meeting" on Sept. 25, 1915. This, with later minutes recording the election of Drs. Keller and R. O. Tucker as presidents, identifies the above list as that of the presidents. A vice-president and secretary also were elected.

Members might be identified by a lapel button about one-half inch in diameter. On the back of Dr. Brush's is engraved, "Clinton Brush, March 22, 1908." At the head of the first column of this article is an artist's rendition of the lapel button. The three words are interpreted by Dr. Brush as, "speed, participation and wisdom." The center is of gold with, in bas relief, the commonly portrayed Greek sculpture of Aesculapius, chest bare, right arm leaning on the serpent-entwined staff and a less common portrayal with a child at the left hand.

Membership and Organization

A loose insert in the minutes book lists the members as a record, obviously, of attendance at the weekly meetings which was kept sporadically. I have thought it should be of interest in listing the members to identify them by date of birth, medical school attended and date of graduation, to provide perspective for today's readers.

Name	Year of Birth	Medical School*	Date of Graduation
S. M. Bloomstein	1869	UN	1896
Charles Brower	1861	VU	1885
C. E. Brush	1879	Hopkins	1903
Robt. Caldwell	1874	UT	1903
W. C. Dixon	1881	VU	1903
Duncan Eve, Jr.	1880	VU	1904
W. F. Fessey	1885	UN	1907
J. F. Gallagher	1884	UN	1906
A. W. Harris	1878	VU	1901
W. E. Hibbett	?	UT	1891
J. P. Keller	?	UN	1904
J. H. Lassiter	1887	UN	1909
W. M. McCabe	1881	VU	1903
W. E. McCampbell	1854	UT	1881
A. G. Nichol	1876	UN	1898
W. A. Oughterson	1873	VU, UN	'95, '06
T. G. Pollard	1877	UN	1903
A. L. Sharber	1878	UT	1904
H. M. Tigert	1880	UN	1902
Harlin Tucker	1890	VU	1911
R. O. Tucker	1863	VU	1885
Olin West	1874	VU	1898

*UN-University of Nashville Medical Department; VU-Vanderbilt University School of Medicine; UT-University of Tennessee College of Medicine, Memphis.

The "science" of medicine for these men as medical students was rudimentary by current standards. Virchow's cellular theory was but a half century old. The pathophysiologic approach to disease had not been born, since physiology was still in swaddling clothes, the science of bacteriology was in its infancy, pharmacology had not been born, nor had biochemistry in its modern sense. Surgical procedures were few, and other than appendectomy, cholecystectomy, and gastroenterostomy they were mainly for suppurative, traumatic and gynecologic conditions and a limited number of orthopedic procedures. The x-ray was described in 1896.

The catalogue of the University of Nashville Medical Department for 1910 shows that 15 of the members of the Asklepiion Club were members of its faculty. Of further interest is an editorial in the August 1909 issue of the *Nashville Journal of Medicine and Surgery* announcing the completion of the merger of the medical departments of the University of Nashville and the University of Tennessee. The members of the Asklepiion Club who had served on the faculty of the University of Nashville and who were assigned new faculty positions were R. O. Tucker, dean and professor of obstetrics; McCampbell, Brush and Oughterson, professors in medicine; Brower, Caldwell, Pollard and Sharber, professors in surgery; Tigert, professor

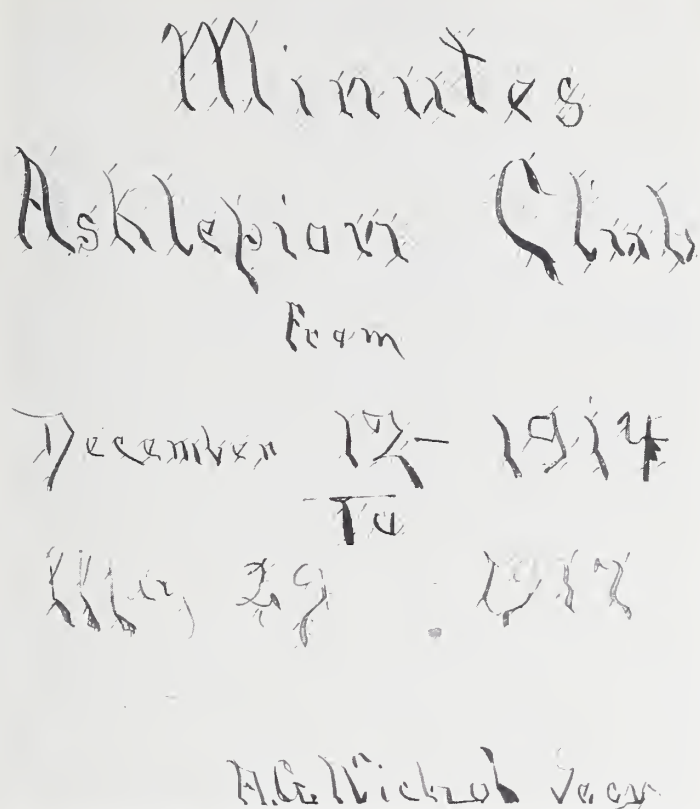


Figure 1. Title page of the Asklepiion Club minutes book.

of gynecology; Hibbett and Bloomstein, professors of diseases of children; Keller, professor of physiology; and Gallagher, demonstrator in anatomy.

The club members listed on the Vanderbilt faculty roster in 1910 were Drs. Dixon, Eve, Harris, McCabe, Harlin Tucker, and West. After the above-noted merger and the move of the school to Memphis, the 1914 catalogue of Vanderbilt now listed as members of the faculty most of the former club members who had served at the University of Nashville, namely, Drs. R. O. Tucker, Caldwell, Brush, Hibbett, Tigert, Oughterson, Gallagher and Nichol.

Over the years there probably were other members who cannot be traced because of the loss of other minutes books. Within the years of 1914-1917 only Drs. Dixon and Gregory were elected to membership. (The latter's name appears among those present at a limited number of meetings. The 1916 Vanderbilt catalogue shows him as an assistant in pathology.) At a meeting in November 1916 the names of four doctors were listed as proposed for membership as well as their sponsors, but their names were later expunged since they failed election.

At the May 29, 1915 meeting, a committee was appointed to "draft a new constitution and by-laws for the Asklepiion Club." In the follow-

ing meeting the only items coming under discussion were whether the annual dues of \$5.00 should be continued or dropped to \$2.00, and a recommendation that one member be dropped from the rolls because of repeated absences at meetings. It also recommended "that a courteous letter be written Dr. W. E. McCampbell asking if it suits his pleasure to be elected to honorary membership." (The list of members shows that Dr. McCampbell was the oldest member by about a decade.) In 1916, Dr. Sharber resigned his membership, which was accepted by the members, but he was then elected to honorary membership. At a meeting in 1917 the club voted to donate \$25.00 from the treasury to a charity.

The date of the club's dissolution is unknown, as is the reason for it. Dr. Brush could not answer this question, but wondered if World War I played a part, or if it was the influenza epidemic, which kept the doctors caring for the sick around the clock.

Meetings

Meetings were held in the members' offices. Dr. Brush said they would have snacks, and on one occasion an announcement was made that a "dutch lunch" would be served at the next meeting. Meetings were held on Saturdays, and occasionally the date in the minutes is thus qualified.

The order of business was almost always as follows: Call to order by the president, usually 8:15 p.m. but at times 8:30, followed by a list of those present. Minutes of the previous meeting were read and approved. Next the essay of the evening was read, followed by discussion. Then a number of case reports were presented, usually two or three, with a free discussion of each. Adjournment was usually at 10:00 to 10:30 p.m.

A review of attendance records shows that the usual attendance was from 12 to 16 of the 21 members. The minutes book shows that a committee of three was appointed annually to set up the roster of essayists and assign dates. Occasionally an essayist had forgotten his assignment, apologizing abjectly, or might bow to a reprimand by the president. Again an essayist might need to be absent because of a professional commitment. Then case reports were offered by some of those present. (In December 1916 the club subscribed to the *Reports of the Massachusetts General Hospital*. Beginning in January 1917, Dr. Gallagher or Dr. Harris presented these for discussion.)

Because the essays and case reports reflect the clinical problems facing the practitioner or reveal "what was new" as of 1914-1917, I have listed the subject matter of the programs and included my commentaries in parentheses (Appendix). Since my undergraduate clinical years, internship, general practice and beginning of a residency all fell within the years 1921-1925, the discussions have a familiar ring. Answers had not been found to questions raised in discussion of the Asklepion Club.

One essay presented to the Asklepion Club has been found in the files of the State Library and Archives. On Sept. 25, 1969, Olin West, Jr., of Nashville, presented a paper to the Old Oak Club, entitled "Aesculapius, 1914." In his introduction to this lay group he provided biographical items about his father which were well known to the medical profession of two generations ago, namely, that he was a member of the Vanderbilt faculty, one-time editor of the *Tennessee State Medical Journal*, director of the Rockefeller Sanitary Commission for smallpox and hookworm control in the state, Commissioner of Health of Tennessee, secretary of the AMA, and elected its president. (Mr. West makes an interesting comment of a competitor to the Asklepion Club, a *Symposium Club*, concerning which I find no documentation.) I quote from this paper since it reveals how closely knit the membership was to permit barbed comments about each other which also show up in the minutes upon occasion.

Commenting that this was his third essay for the club's program, Dr. West wrote that,

At last, I have been smart enough to discover the thinly veiled insinuation that I am not competent to discuss any subject except intestinal parasites, and the yet more thinly veiled suggestion that my efforts at discussing that subject are feeble and futile. And so upon this occasion, as proof of my resentment, I flatly refuse to repeat. . . .

I have tried faithfully and hard to discover some live and timely subject which I might present for the consideration of this learned aggregation of talent, not with any hope of controverting the opinion of the program committee as so forcibly expressed by their assignments to me, but simply that I might have something for the sharpshooters of the Club to amuse themselves with. Feeling equally capable of writing upon subjects surgical, medical, neurological, or otherwise, and having laboriously reviewed the whole field without selection, it finally occurred to me that the Club might be glad to escape for one evening the scientific, but sarcastic scoldings of Gallagher, the dig-

nified but doubtful declarations of Hibbett; the effulgent but eruptive emissions of Tucker; the pithy but ponderous palaverings of Pollard; the luminous but Lane-iscent lectures of Sharber; the grand but gyroscopic gesticulations of Caldwell; the trite but torpid talkings of Tigert; the oracular but "orful" orations of Oughterson; the candid but chaotic conclusions of Keller; the ornate but Osleric observations of McCampbell; the valued but verbose vaporings of Bloomstein; the magnetic but maniacal musings of McCabe; the highbrowed but Hopkins-esque harangues of Brush; the few but funny fancies of Fessey; the nifty but nebulous notations of Nichol; the breezy but brusque believings of Brower; the helpful but hypothetical hints of Harris; and the learned but lethargic lustrations of Lassiter. And so, Mr. President, did I not modestly realize that you are all yearning for to hear the witless and worm eaten whittlings of West, I would now move that we adjourn.

Then in a more serious vein he reviewed copies of the *Nashville Journal of Medicine and Surgery* of 1865. His review of clinical presentations, discussions and beliefs of the "greats" and "near greats" of medicine and surgery of 1865 were both edifying and amusing. He ended his paper with,

Conclusions were varied, some ridiculous, some remarkable for the nearness with which they approached the truth as established by modern methods of investigation. Altogether, the reader of medical literature of fifty years ago can but have his admiration excited for the ingenious and courageous men who fought the battles of medicine in the years that are gone. And he will be impressed, too, with the fact that many of the questions that are now agitating our minds were as carefully considered and equally as well solved as they are at this time.

Discussion

This story of three years out of a presumed decade and more of the life of the Asklepion Club reveals a chapter of Nashville's medicine buried or "lost" in the shadows of the past. It is a chapter that should be included in the city's medical history.

The subject matter of the essays and their discussions, and the many case reports, reveal the problems which faced the doctors of 60 to 70 years ago—concern with infectious diseases and the exigencies of the limited spectrum of surgical diseases of the day. The essays and discussions show that this group of doctors were familiar with the writings of the well-known clinical teachers of their day.

The members of the Asklepion Club (and possibly of the rival Symposium Club) represented the "cream of the crop" of Nashville's physicians. They were of the faculties of the University of Nashville Medical Department and of

Vanderbilt University School of Medicine. It should be recalled that there were still many licensed practitioners and colleagues who, to quote the State Board of Medical Examiners (1890), "never saw within the walls of a medical college . . . and many of them never read through consecutively a single medical work."¹ From the Minutes of the Asklepion Club, 1914-1917, we may glean an understanding of what manner of men these practitioners of medicine were. Obviously, they were practitioners of competence as measured at that point in time.

Especially heartwarming is the realization that these men had the ultimate attribute of the *doctor* (from the Latin *docere*, to teach) "scholars to teach each other," and had the scholarly attribute of *curiosity*, which Samuel Johnson described as "one of the permanent and certain characteristics of a vigorous intellect." They were men of vision. Dr. Gallagher introduced the Massachusetts General Hospital reports (along with Dr. Harris). In his centennial history, Hamer described Dr. Gallagher as repeatedly urging the TMA House of Delegates, as early as 1924, to "undertake to carry postgraduate medical instruction to physicians who live where there are no hospitals or medical schools."¹

When I arrived in Nashville in 1936 and began my regular attendance at the weekly meetings of the Nashville Academy of Medicine, I became casually acquainted with possibly the half of the members of the Asklepion Club who were still living, better acquainted with Dr. Gallagher, and especially Dr. Al Harris, professor of neuro-

psychiatry at Vanderbilt, whom I met on Thursday mornings in the outpatient service.

If the living members of the Asklepion Club who had been among the leaders of Nashville's medical profession of their generation had apparently been outdistanced in discussion and argument at the Academy meetings by those of a succeeding generation, it should drive home a lesson to us all. That lesson, to be learned by each generation, is to view the persons and activities of the previous generation in perspective. Rather than to attempt to measure their predecessors by the yardstick applied to their own contemporaries, members of a younger generation should recognize that those of former generations displayed identical scholarly attributes, but of necessity within the confines of the knowledge of their own day.

The corollary is obvious; the competence of the members of each generation, if they live long enough, will be subjected to the same patronizing scrutiny by members of the succeeding generation.

Acknowledgments:

My thanks go to Clinton E. Brush, Nashville Architect, for arranging the privilege of spending an enjoyable hour with his father, Dr. Clinton Brush, whom I met only casually many years before, after my arrival in Nashville.

Quotations in this paper from "Aesculapius 1914" are reproduced with permission of the Tennessee State Library and Archives.

REFERENCES

1. Kampmeier RH: *History of the Tennessee Medical Association, 1930-1980*. Nashville, Tennessee Medical Association, 1981.

APPENDIX

1914

- Dec. 12th Jaundice in Tuberculosis, by Keller. (Discussion was critical of the subject as presented.)
- Dec. 19th First Stage of Labor, by R. A. Tucker. (Much discussion pro and con of use of forceps, and morphine with scopolamine.)

1915

- Jan. 2nd "No essay because of misunderstanding" by Dr. West. Case reports: Diphtheritic paralysis; influenza meningitis; pneumococcal meningitis; *E. coli* infection of the urinary tract.
- Jan. 9th No meeting, lack of a quorum.
- Jan. 17th Myelitis, by Harris.
- Jan. 23rd Undescended Testicle, by Pollard.
- Jan. 30th "Unknown," by West. (Discussion of medical education, students, ethics, premedical education, etc.)
- Feb. 6th Ectopic Gestation, by Sharber. (Discussion and disagreements as to diagnosis and treatment.)
- Feb. 13th Essayist called out—Discussion "of syphilis at length by the club."
- Feb. 20th Essayist absent. Case reports: Gastric ulcer; hemorrhage from bowel after hemorrhoidectomy; hydronephrosis; toxic psychosis. Question was raised for discussion concerning use of the x-ray to diagnose pregnancy in a teenager.

Feb. 27th	Prevention Typhoid and Allied Conditions, by Hibbett. (This stimulated a long discussion of historic interest today as to its epidemiology.)
Mar. 13th	Cardiovascular Syphilis, by Oughterson. (Discussion of pathologic findings postmortem and value, if any, of treatment.)
Mar. 20th	Intestinal Stasis, by Caldwell. (No consensus developed on this subject.)
Mar. 27th	Coxa Vara, by Nichol.
Apr. 3rd	Essayist absent. Case reports: Abdominal distress and weight loss; placenta previa; hematuria; uterine hemorrhage.
Apr. 10th	Essayist absent. Case reports: Strongly positive Wassermann in case of abdominal pain in follow-up of above case; two cases pneumonia of unusual onset; abdominal cyst in a child; fracture head of radius, dislocation of elbow with impacted Colles fracture.
Apr. 17th	Diagnosis and Treatment Lobar Pneumonia in Children, by Bloomstein. (Discussion was of historical interest for today.)
Apr. 24th	Ectopic Gestation, by Pollard. (Discussion of diagnosis, treatment, and shock upon rupture.)
May 1st	Vulvovaginitis in Children, by Keller. (Prolonged discussion on etiology, treatment and avoiding genital manipulation to prevent development of masturbation.)
May 8th	"Essayist not prepared." Presentation of x-ray plates of unusual fractures, followed by case reports.
May 15th	Inevitable Abortion, by R. O. Tucker. (Discussion occupied three pages, considering the pros and cons of interference, the large role of criminal abortions, infection, etc.)
May 22nd	Essayist absent. Case reports: Puerperal convulsions and cesarean section; an obscure abdominal condition.
May 29th	Discussion on planning for a new constitution and by-laws; committees appointed. Case report: Pernicious vomiting of pregnancy.
Sept. 3rd	Discussion of planning for new constitution and by-laws. Case reports: Chickenpox and a 2 + Wassermann; postoperative intestinal obstruction following appendectomy in one and after herniorrhaphy in another; much discussion of anemia in syphilis.
Sept. 11th	Committee reports on schedules for essays. Prostatitis after Entry into a "Catheter Life," by Pollard. (Discussion of indications of one- vs two-stage prostatectomy and complications in each.)
Sept. 18th	Postoperative Results of Trachelorrhaphy and Amputation of the Cervix, by Tigert. (Long discussion on indications, techniques and complication of hemorrhage.)
Sept. 25th	Fractures without Pathognomonic Symptoms, by Gallagher. (Much discussion of impacted fractures and help of the x-ray, although there may be problems in interpretation.)
Oct. 2nd	Election of officers, committee appointments. Surgical Treatment of Aneurysm, by McCabe. (Discussion of aneurysmorrhaphy, techniques and contributions of Matas.)
Oct. 9th	Open vs Closed Method of Ether Administration, by Lassiter. (Discussion was prolonged on the pros and cons of using ether.)
Oct. 16th	Barnum and Bailey's Circus vs Asklepion Club, by West. (Minutes state merely, "commendatory remarks made by Dr. Gallagher.")
Oct. 23rd	No meeting, lack of a quorum.
Oct. 30th	No meeting, lack of a quorum.
Nov. 6th	Congenital Dislocation of Hip, by H. Tucker.
Nov. 13th	Essayist Harris—no paper but reported an unusual case of cerebellar ataxia. (Discussion of possible causes.)
Nov. 20th	Hemoptysis and Hematemesis in Typhoid Fever, by Brush.
Nov. 27th	Essayist—misunderstanding—no essay—"effusive apologies." Case report of long-standing syphilis and question of the value of the Wassermann test. Much discussion of the curative efficacy of mercury and the use of Salvarsan for early syphilis.
Dec. 4th	Uterine Prolapse, by Caldwell. (Three pages in the minutes describing diverse and strong feelings of what should be done for malposition of uterus. Dr. McCabe commented, "The uterus offers a great field for so-called surgical gymnastics.")
Dec. 11th	Nontuberculous Disease of the Lung, by Oughterson. (Discussion of emphysema, and differentiation of tuberculosis and syphilis of the lung.)
Dec. 18th	Infectious Diarrhea, by Bloomstein. (Discussion involved milk and other foods as a source; the use of vaccines.)
1916	
Jan. 1st	Burns, by Keller. (Discussion of dressings of adhesive tape, vaseline, picric acid, scarlet red ointment, autogenous grafts.)
Jan. 8th	Essayist absent. Case reports: Hemophilia; rash after serum therapy; pruritis vulvae; cases of second operation for appendectomy following drainage for ruptured appendix.
Jan. 15th	Twilight Sleep, by R. O. Tucker. (Discussion of indications and dangers to children; for use in hospitals only and by experienced persons.)
Jan. 22	Gonorrhea in Women, by Pollard. (Discussion of difficulty in diagnosis and varying opinions as to treatment.)
Jan. 29th	Tubercular Kidney, by Dixon.
Feb. 5th	Intestinal Obstruction, by McCabe. (Discussion of difficulties in diagnosis, when to operate and procedures to be used.)
Feb. 12th	Cerebral Apoplexy, by Harris. (All agreed cerebral thrombosis more frequent than hemorrhage and that purgation "did more harm than good.")
Feb. 19th	Remarks on Cancer, by Sharber. (Discussion included pathophysiology, prevention by removal of all tumors, the prognosis of cancer of breast and cervix, and preventive surgical treatment of cervical laceration.)
Feb. 26th	Cancer of the Gallbladder and Its Prevention, by H. Tucker. (Reports from Mayo Clinic considered, prognosis and prevention by cholecystectomy for stones.)
Mar. 4th	Gastroenterostomy, by Gallagher. (A description of original ideas on technique.)
Mar. 11th	Treatment of Diabetes Mellitus by the Allen Method, by Brush. (Discussion of three pages devoted to theories of pathogenesis and treatment by starvation diet.)

Mar. 18th	Treatment of Acute Gonorrheal Epididymitis, by Tigert. (All agreed that surgical treatment best for quick relief of pain and that vaccines and antiseptics were useless.)
Mar. 25th	No meeting, lack of a quorum.
Apr. 1st	Treatment of Hip Disease, by Nichol.
Apr. 8th	Angina Pectoris, by Oughterson. (Speculations upon the etiology; the frequency of "gas" was recognized with relief by flatus; fatal outcome recognized; pain related to sympathetic nervous system.)
Apr. 15th	Dr. Tucker reported that his activity in behalf of the Galloway Memorial Hospital had prevented the preparation of an essay.
Apr. 29th	Diarsenal, by Lassiter. (Several agreed it is not as efficacious as Salvarsan or Neosalvarsan but equally as toxic and dangerous, especially to the kidneys.)
May 6th	Some Surgical Considerations of Gastric and Duodenal Ulcer, by Tigert. (Discussion of difficulty in diagnosis; a mortality rate of 20% with medical treatment; gastroenterostomy cures duodenal ulcer but not gastric ulcer.)
May 9th	Business Meeting—Case reports: Exophthalmic goiter; syphilis, pellagra and distended abdomen.
May 16th	Suppurative Appendicitis, by Pollard. (Discussion of four pages on when and when not to drain; types of drains; duration of drainage, fecal fistulae; hernias of abdominal wall.)
May 22nd	Extrauterine Pregnancy, by H. Tucker. (Discussion of differential diagnosis and importance of history; treatment.)
May 30th	Some Phases of Intestinal Obstruction, by McCabe.
Oct. 7th	Present Status of the Use of Vaccine in the Treatment of Diseases, by Lassiter. (Discussion included bacteria, proteoses, ferments, autogenous and stock vaccines, and their use in typhoid fever, pneumonia, epididymitis and rheumatoid arthritis.)
Oct. 14th	No meeting, lack of quorum.
Oct. 21st	Diagnosis of Blood Diseases, by Brush.
Oct. 28th	Essayist absent. Case reports: Rudimentary rib shown by x-ray; effect of von Ruck's serum in tuberculosis; report on Milwaukee convention for prevention in infant mortality.
Nov. 3rd	Essayist absent. Case reports: Extrauterine pregnancy with death; two cases of gangrene in the throat from diphtheria, death in one; unconsciousness with chest pain, cyanosis, recovery.)
Nov. 11th	Painful Feet, by Nichol.
Nov. 18th	Role of Disinfectants in Prevention of Communicable Diseases, by Hibbett. (Discussion of disinfection and fumigation, carbolic acid, formaldehyde, and sulphur and moisture.)
Nov. 25th	Epilepsy, by Harris. (Secretary wrote, "best paper he has read, but few of members are sufficiently versed to discuss it.")
Dec. 9th	The essayist, Dr. McCabe, having misplaced his paper, demonstrated by drawings original ideas for lateral anastomosis of the intestine.
Dec. 16th	Transfusion of Blood, by Caldwell. (A historic discussion of an experimental procedure of little if any clinical use, because of insufficient knowledge of blood chemistry and coagulation; several methods of transfusion but no easy one; one of the members reported he had used transfusion in one patient each, hemophilia, pernicious anemia, typhoid fever, multiple knife wounds—all had died, and he concluded transfusion is of no value.)
Dec. 23rd	Treatment of Uterine Fibroids by X-ray, by Dixon. (Consensus was that hysterectomy is the best method of treatment. X-ray treatment may stop bleeding, although some had reservations about this.)
Dec. 30th	Essayist absent. Case reports: Chickenpox and scarlet fever concomitantly; cesarean section for convulsions with death.
1917	
Jan. 6th	Focal Infection, by Keller. (There was much discussion of Rosenow's work on <i>Strep. viridans</i> .)
Jan. 13th	Essayist absent. Case reports: Uterine prolapse of 2nd degree with much discussion of operations for uterine prolapse.
Jan. 20th	Remarks on Proposed State Tuberculosis Hospitals, by West.
Jan. 27th	Safety First Movement in Railway Surgery, by Eve.
Feb. 3rd	Acidosis, by Gregory.
Feb. 10th	Varicose Veins, by Pollard. (Discussion concerned stripping operations and chronic ulcers; all agreed that syphilis was the most common cause of leg ulcers.)
Feb. 17th	Transition from Gastric Ulcer to Cancer, by Tigert. (Discussion revolved around the Mayo Clinic report of finding cancer at the edge of gastric ulcers. The members were not convinced.)
Feb. 24th	Syphilis of Liver, by Lassiter. (Discussion led to agreement that a tumor of the liver required a course of antisyphilitic treatment before metastatic cancer is considered; discussion also of hepatic syphilis in children with prenatal syphilis.)
Mar. 3rd	Essayist absent. Case reports: Mastoiditis in child having a Kernig sign; case of osteomyelitis.
Mar. 10th	Curability of Syphilis, by Oughterson. (Discussion of two pages with consensus that syphilis is never cured; pediatrician denied this for congenital syphilis.)
Mar. 17th	Diagnosis and Treatment of Lobar Pneumonia in Children, by Bloomstein. (Discussion of two pages devoted mainly to the common problem of differentiating pneumonia from acute appendicitis.)
Mar. 24th	Essayist absent. Case reports: Sciatica and a mass in the pelvis; persistent diarrhea; amebic dysentery with liver abscess.
Mar. 31st	Gastric Tetany, by Dixon.
Apr. 14th	Differential Diagnosis of the Exanthemata, by Hibbett. (Discussion was prolonged on the clinical characteristics of smallpox, measles, chickenpox and scarlet fever.)
Apr. 21st	No meeting; lack of a quorum.
Apr. 28th	Essayist absent. Case report from MGH by Gallagher.
May 6th	Surgery of the Spleen, by Caldwell. (Discussion revolved around splenectomy for pernicious anemia.)
May 12th	Essayist failed to present paper and was "reprimanded." Case reports: Suppurating dermoid cyst; strangulated hernia; abdominal pain, absent breath sounds at right base, blood culture positive for paratyphoid organism.
May 26th	Hodgkins Disease, by Keller.



Endoscopic Retrograde Cholangiopancreatography (ERCP)

Clinical Applications

ALAN C. DOPP, M.D.

This article is sponsored by the Tennessee Society for Gastrointestinal Endoscopy to further the knowledge of the application of endoscopy in the diagnosis of gastrointestinal disease.

History

Endoscopic retrograde cholangiopancreatography (ERCP) was first described by McCune et al¹ during the late 1960s. Fiberoptic endoscopic technology had by then developed sufficiently to allow routine examination of the duodenum. Utilizing a modified side-viewing endoscope, it then became possible to demonstrate the ampulla of Vater. Clinical research led to refined instrumentation and, finally, widespread use of this technique by practicing endoscopists throughout the world. ERCP provides the capability of safe nonoperative demonstration of biliary and pancreatic ductal architecture, as well as endoscopic examination of duodenal and periampullary anatomy.

In the 13 years since McCune first described the technique, dramatic and exciting advances have been made in "imaging" of the upper abdomen. High-resolution ultrasonography and computed axial tomography (CT scan) as well as "skinny" needle percutaneous transhepatic cholangiography (PTC) now complement ERCP in the evaluation of upper abdominal pathology. In 1982, the clinician is faced with a plethora of diagnostic tools, and the dilemma of which to use and in what order to use them. It is the purpose

of this paper to attempt to define the place of ERCP within the framework of these other diagnostic modalities. Therapeutic application of ERCP will also be discussed.

Technique

The standard instrument for ERCP is a side-viewing endoscope of suitable length. Newer duodenoscopes possess an insulated tip to allow safe use of electrocautery. An experienced radiologist, endoscopy assistant, and x-ray technician are needed to complete the team for ERCP. Contraindications for ERCP include an uncooperative patient, unstable cardiovascular status, and previous gastroenterostomy with a long afferent loop preventing endoscopic approach to the ampulla of Vater. Special consideration should be given when acute pancreatitis, pancreatic pseudocyst, or cholangitis are known to be present. Successful cannulation of one or both ductal systems may occur in 85% to 95% of attempts. Pancreatograms should be achievable at least 85% of the time and cholangiograms at least 75% of the time. In addition to demonstration of ductal anatomy, collection of pancreatic juice and bile for crystal study, cytology, and other biochemical study with or without secretin or sincalide stimulation can be obtained.

Ultrasonography and CT Scans

The appropriate use of ERCP can be determined only after review of the individual clinical situation encountered and a consideration of alternative diagnostic studies. Upper abdominal ultrasonography is most useful as an initial screening study for biliary and/or pancreatic disease. It can provide information about the cali-

Reprint requests to 300 25th Ave. North, Nashville, TN 37203 (Dr. Dopp).

ber of intrahepatic biliary ducts, common bile duct, the presence of cholelithiasis, and the presence of metastatic liver disease or pancreatic mass, including pseudocyst. It is less useful in detecting choledocholithiasis and dilated pancreatic ducts. Occasionally, upper abdominal ultrasound will demonstrate unexpected findings such as aortic aneurysms and renal cysts or mass. Its accuracy is limited by the skill of the technician, obesity, intestinal gas, retained barium, an uncooperative patient, and the experience of the interpreter.

The CT scan can provide information similar to that of ultrasonography. It is considerably more expensive, often enhanced by obesity, and associated with some radiation exposure. Its interpretation is less dependent on the experience of the interpreter and more dependent upon the functioning of complex equipment. Studies are in progress to determine the relative specificity and sensitivity of these two less invasive procedures in biliary tract and pancreatic disease. Unfortunately, these studies often fail to give precise definition of biliary and pancreatic disease.

Fine-Needle PTC

Although PTC was first introduced in 1937, its safety and success significantly increased by the development of the "skinny needle" by Okuda in 1974.² Many studies document close to 100% success rate with biliary obstruction. Successful PTC with normal caliber intrahepatic biliary radicles is mainly dependent on the number of needle "passages," with a success rate of 25% to 96% described.²⁻⁴ Contraindications to PTC include abnormal bleeding parameters, cholangitis, ascites, known sensitivity to contrast agents, right subphrenic abscess or empyema, suspected echinococcal disease, or suspected vascular hepatic lesions. Complication rates are low, with bile peritonitis and significant hemoperitoneum occurring in about 1.5% of cases. Sepsis, as manifested by chills and sweats, occurs in 5% to 12% of patients with dilated biliary ducts.²⁻⁴ Fine-needle cholangiography has become a highly reliable and safe means of visualizing the biliary tree in the jaundiced patient. This technique is being developed for other diagnostic and therapeutic maneuvers, e.g., percutaneous transhepatic portography for portal venography and manometric measurement,⁵ selective obliteration of gastroesophageal varices,⁶ and for percutaneous transhepatic drainage of obstructed biliary ducts in preparation for definitive surgery or for pallia-

tion when obstruction is due to unresectable neoplasm.⁷

ERCP—Diagnostic Applications

Although the fine-needle PTC can be used with a very high success rate in cases with biliary tract dilatation, the ERCP success rate is not dependent on caliber of intrahepatic biliary radicles. The ERCP will show the dilated or nondilated biliary ducts when the common bile duct is successfully injected, provided there is not a complete obstruction.

The early diagnosis of pancreatic carcinoma remains a frustrating goal. Despite impressive advances in imaging of the pancreas, the curative resection rate has not improved much.⁸ Perhaps by its very nature, by the time symptoms occur the probability of localized disease is small. However, it is now possible to make a rapid diagnosis after symptoms occur, thus eliminating prolonged inpatient diagnostic evaluations. Ultrasonography or CT scan and pancreatic functions tests are the best tests to detect pancreatic disease. ERCP and selective pancreatic arteriography are the most sensitive tests to diagnose pancreatic carcinoma.⁹ Retrograde pancreatography will identify pancreatic carcinoma in over 90% of cases.¹⁰

Unlike pancreatic carcinoma, periampullary neoplasms more often cause symptoms while they are still localized and resectable. This diagnosis should be considered in any patient with unexplained pancreatitis, cholestasis, or unexplained upper abdominal pain, especially if upper GI series suggests a prominent papilla of Vater. ERCP is most useful in providing gross endoscopic and histologic evidence for neoplasm.

Recurrent acute pancreatitis and chronic pancreatitis may have many etiologies.¹¹ ERCP is the only nonoperative means of accurately defining pancreatic ductal anatomy. It is useful in preoperative planning and demonstrating satisfactory postoperative pancreatic drainage. Ultrasonography or CT scan usually should be done before ERCP, especially in patients with suspected pancreatic pseudocysts, since virtually all deaths following ERCP have occurred as a result of recrudescence of inflammation or infection in these patients. Thus, ERCP should only be done in those patients as preoperative procedure.¹² The finding of pancreatic duct calculi, stricture, obstruction, and the incidental finding of biliary tract disease may trigger a surgical procedure. If

partial pancreatectomy is contemplated, a retrograde pancreatogram should provide a guide so that no undrained pancreatic segment is left behind. Pancreas divisum, a congenital anomaly where the ventral (Wirsung) and dorsal (Santorini) pancreatic ducts fail to fuse in utero, is detected seven times as often in patients with pancreatitis as in patients undergoing ERCP for primary biliary tract disease. As a result of this nonfusion, the bulk of the pancreas is drained through the accessory papilla, which may be inadequate and lead to pancreatitis of the dorsal pancreatic element. Surgical drainage or resection may improve these symptoms. In one series, among 78 patients with unexplained recurrent pancreatitis, 26% have this anomaly.¹³ Although clinical research is continuing in this area, ERCP can add a new dimension to the understanding of so-called idiopathic pancreatitis. ERCP is also helpful in the workup of pancreatic ascites and pancreatic fistulae.¹⁴

The diagnostic application of ERCP to primary biliary tract disease is similar to fine-needle PTC when oral cholecystography or intravenous cholangiography are contraindicated or ineffective. ERCP is often helpful, particularly when dilatation of intrahepatic biliary radicles is not present, thus reducing the success rate of PTC. ERCP can be used when PTC is contraindicated. At increased risk, ERCP can be done preoperatively in the face of cholangitis, since direct contamination of the vascular space is less likely to occur than with PTC. It can also be used in patients with a history of radiocontrast hypersensitivity but with some increased risk. Indications for ERCP are listed in Table 1.

TABLE 1

INDICATIONS FOR ENDOSCOPIC RETROGRADE CHOLANGIOPANCREATOGRAPHY (ERCP)

1. Jaundice of undertermined etiology
 - A. Suspected extrahepatic biliary obstruction (periampullary)
 - B. Intrahepatic biliary obstruction
2. Suspected or known pancreatic disease
 - A. Pancreatitis
 - B. Neoplasm
3. Unexplained severe abdominal pain of suspected biliary or pancreatic origin
4. Therapeutic papillotomy extraction or dissolution of choledocholithiasis or placement of oral common bile duct stints

In this country, the evolution of therapeutic uses of ERCP is in its infancy. Endoscopic papillotomy is now well described and is relatively safe and reliable in patients with choledocholithiasis who are otherwise poor operative risks, particularly if they have previously undergone cholecystectomy.¹⁵⁻¹⁷ Utilizing specialized electrocautery accessories, the papilla of Vater is enlarged. If retained stones fail to pass spontaneously, they may be removed with a variety of instruments (lithocentesis).¹⁷ They may also be dissolved with continuous infusion of bile salts through a retained oral or transnasal catheter placed at ERCP.¹⁸ A technique for endoscopic cholangiodilation has been described for anastomotic stricture.¹⁹ As the biliary tree becomes more accessible to endoscopic instrumentation, the safety and range of options available will certainly increase.

REFERENCES

1. McCune WS, Shorb PE, Moscovitz H: Endoscopic cannulation of the ampulla of Vater: A preliminary report. *Ann Surg* 167:752, 1968.
2. Okuda K, Tanikawa K, Enaura T, et al: Nonsurgical percutaneous transhepatic cholangiography: Diagnostic significance in medical problems of the liver. *Am J Dig Dis* 19:21-36, 1974.
3. Elias E, Hamlyn A, Jain S, et al: A randomized trial of percutaneous transhepatic cholangiography with the Chiba needle versus endoscopic retrograde cholangiography for bile duct visualization in jaundice. *Gastroenterology* 71: 439-443, 1976.
4. Pereiras R, Chiprut R, Greenwald RA, et al: Percutaneous transhepatic cholangiography for bile duct visualization in jaundice. *Gastroenterology* 71:439-443, 1976.
5. Smith-Laing G, Camilo ME, Dick R, et al: Percutaneous transhepatic portography in the assessment of portal hypertension. *Gastroenterology* 78: 197-205, 1980.
6. Freeny PC, Kidd R: Transhepatic portal venography and selective obliteration of gastroesophageal varices using siobutyl 2 - cyanoacrylate (Bucrylate). *Digestive Diseases and Sciences* 24:321-330, 1979.
7. Nakayama T, Ikeda A, Okuda K: Percutaneous transhepatic drainage of the biliary tract. *Gastroenterology* 74:554-559, 1978.
8. DiMagno EP: Pancreatic cancer: A continuing diagnostic dilemma. *Ann Intern Med* 90:847-848, 1979.
9. DiMagno EP, Malagelada JR, Taylor WF, et al: A prospective comparison of current diagnostic tests for pancreatic cancer. *N Engl J Med* 297:737-742, 1977.
10. Silvis SE, Rohrmann CA, Vennes JA: Diagnostic accuracy of ERCP in hepatic, biliary, and pancreatic malignancy. *Ann Intern Med* 84:438-440, 1976.
11. Sleisenger MH, Fordtran JS: *Gastrointestinal Disease*, ed 2. Philadelphia, W.B. Saunders Co, 1978, pp 1418, 1439-1456.
12. Bilbao MK, Dotter CT, Lee EG, et al: Complications of endoscopic retrograde cholangiopancreatography (ERCP). A study of 10,000 cases. *Gastroenterology* 70:314-320, 1976.
13. Cotton PC: Congenital anomaly of pancreas divisum as a cause of obstructive pain and pancreatitis. *Gut* 21:105-114, 1980.
14. Greenwald RA, Deluca RF, Raksin JB: Pancreatic-pleural fistula: Demonstration by endoscopic retrograde cholangiopancreatography (ERCP) and successful treatment with radiation therapy. *Digestive Diseases and Sciences* 24:240-244, 1979.
15. Safrany L: Duodenoscopic sphincterotomy and gallstone removal. *Gastroenterology* 72:338-343, 1977.
16. Koch H, Rosch W, Schaffner O, et al: Endoscopic papillotomy. *Gastroenterology* 73:1393-1396, 1977.
17. Sommon DS, Falenstern DB, Kessler RE: Management of biliary calculi by retrograde endoscopic instrumentation (lithocentesis). *Gastrointest Endosc* 23:82-86, 1979.
18. Nagai N, Toki F, Oi I, et al: Continuous endoscopic pancreatocholedochal catheterization. *Gastrointest Endosc* 23:78-81, 1976.
19. Lee TG, Katon R, Freeny PC, et al: Endoscopic retrograde cholangiodilation. *Gastrointest Endosc* 23:171-172, 1977.

Adenocarcinoma of the Stomach Associated With Pregnancy

C. KEMP SKOKOS, M.D. and JEFFREY LIPSHITZ, M.B.Ch.B.

Nausea and vomiting in pregnancy is being encountered by the obstetrician in 25% to 80% of pregnant women. It may occur at different times throughout the day but more commonly in the morning. It rarely disturbs the ability to eat, and weight loss is rare. Most often the nausea and vomiting begin at six weeks gestation and may last up to 16 to 20 weeks gestation. Hyperemesis gravidarum, on the other hand, occurs in approximately 3.5 per 1,000 live births¹ and may result in weight loss, fluid and electrolyte imbalance, nutritional deficiencies, and ketosis. Patients have developed jaundice, peripheral neuritis, coma, and hepatorenal failure. Other causes of vomiting unrelated to the pregnancy are mostly gastrointestinal or hepatobiliary in origin. These should be kept in mind, especially when the vomiting is persistent and extends over a prolonged period. The following case is an example.

Case Report

A 30-year-old gravida 8, para 3, abortus 4, white woman was referred to our hospital at 31 weeks gestation with a history of nausea and vomiting for five months after having been hospitalized twice elsewhere in the previous month for hyperemesis. She was treated with intravenous fluids and thiorazine without success, and over the previous five-month period she had lost 25 lb. She had experienced similar nausea and vomiting in her other pregnancies but they had not persisted. She denied any diarrhea, melena, passing bright red blood per rectum, or change in the color or consistency of her stools. Since early pregnancy she had noticed an epigastric mass which would disappear after vomiting.

The patient was in a motor vehicle accident in 1971 and had had surgery for a duodenal rupture just proximal to the ligament of Treitz. She smoked 20 cigarettes per day.

Physical examination revealed a cachectic afebrile woman with blood pressure of 100/84 mm Hg, pulse 120 beats per minute, and respiratory rate of 16 per minute. She was 5 ft 3

in tall and weighed 123 lb. A 3x3-cm mobile midepigastric mass was palpated. She was not jaundiced. She had approximately a 22-week-size uterus with fetal parts palpable abdominally. The cervix was closed and uneffaced with a vertex presentation.

Extensive laboratory data were within normal limits for pregnancy. Hematocrit was 31%. Ultrasound examination on admission revealed a 26-week fetus, with a total intrauterine volume within the lower limits of normal; the upper abdomen appeared normal.

Shortly after admission the patient was started on total parenteral nutrition (TPN), and a saline loading test, used to evaluate gastric outlet obstruction, was positive. Endoscopy revealed normal gastric mucosa with antral narrowing, but as the narrowing was thought to be due to the previous surgery, no washings or biopsies were obtained. A non-stress test (NST) and a contraction stress test (CST) were nonreactive and negative respectively. The patient gained weight while on TPN but the nausea and vomiting persisted. She had weekly NSTs and CSTs. During the third week, because of a non-reactive NST with a positive CST and a baseline fetal heart rate of 190, a cesarean section was performed and a viable female infant weighing 1,360 gm was delivered with Apgar scores of 2 and 3 at one minute and five minutes respectively. The placenta weighed 380 gm. The epigastric mass was palpated and at the time was thought due to fibrosis secondary to the previous abdominal trauma and surgery. Thus no biopsy was taken. TPN was continued postoperatively and she had a benign course. The infant developed respiratory distress syndrome and died at 48 hours of age due to intraventricular hemorrhage.

Approximately two weeks after the cesarean section, an exploratory laparotomy was performed to correct the gastric outlet obstruction. A frozen section of the biopsy revealed poorly differentiated diffusely infiltrating adenocarcinoma of the stomach. A subtotal gastrectomy and a Billroth II procedure were performed. The cancer involved more than 50% of the greater curvature of the stomach.

After recuperating from surgery the patient was started on triple-drug chemotherapy consisting of 5-fluorouracil, mitomycin-C, and adriamycin, a combination regimen undergoing phase III clinical trials. At the time of this writing, she is one year postoperative with a stable weight between 100-105 lb.

Discussion

The incidence of cancer of the stomach has decreased in the United States, and is now extremely rare under the age of 35 years. In the 1947 cancer survey in the United States, the incidence rates were 34.8 for men and 18.8 for women per 100,000 population. In 1962 in the

From the Department of Obstetrics and Gynecology, University of Tennessee Center for the Health Sciences, Memphis.

Reprint requests to Department of Obstetrics and Gynecology, University of Tennessee, 853 Jefferson, Memphis 38163 (J. Lipshitz, M.B.Ch.B.).

state of Connecticut the incidence rates were 15.8 and 7.8². The peak incidence is in the sixth decade and men are affected twice as often as women. The overall five-year survival rate is approximately 15%.³

Cancer of the stomach is a very rare condition associated with pregnancy. Kasugai of the Aichi Cancer Center Hospital in Japan reviewed the literature of Japan where gastric cancer comprises more than half of the cases of cancer. He found only 44 cases of cancer of the stomach in pregnancy reported from 1916 to 1980 (personal communication). The most common symptoms reported by Yamagata were nausea and vomiting which occurred in 62%, epigastric pain in 43%, and belching and heartburn in 24% of the patients. He also found that a mass was palpable at the first clinic visit in a third of the patients and in almost half of the patients after delivery.⁴ Weight loss is very common and there is a high association with pernicious anemia,⁵ a rare entity in pregnancy.

The diagnosis can usually be made using contrast studies and gastroduodenoscopy with cytology and biopsies. The prognosis is consistently poor as early cancer limited to the mucosa and submucosa is found in only about 8% of pa-

tients. Even with minor symptoms resectability by radical surgery is still only about 50%.⁵

The diagnosis of cancer in this patient was delayed for two reasons. Initially, the vomiting was felt to be pregnancy related. The diagnosis of cancer was entertained but obstruction due to fibrosis from her previous trauma and surgery was thought more likely in this 30-year-old patient. The plan was to continue the pregnancy with TPN and frequent fetal surveillance and then to reevaluate the patient postpartum. If the diagnosis is made in the first trimester or early second trimester, treatment should be considered at that time. If the diagnosis is made after this time, treatment should probably be withheld until the stage of fetal viability. Treatment is primarily surgical with adjunctive chemotherapy or radiotherapy.

REFERENCES

1. Sleisenger MH, Fordtran JS: *Gastrointestinal Disease*. Philadelphia, W.B. Saunders Co, 1973, pp 127-143.
2. Ackerman CV, Del Regato JA: *Cancer*. St. Louis, C.V. Mosby Co, 1970, pp 426-465.
3. Schwartz SL, Lillehei RC, Shires GT, et al: *Principles of Surgery*. New York, McGraw-Hill Book Co, 1974, pp 1082-1083.
4. Yamagata S, Uzuka Y: Malignant tumor during pregnancy—from the standpoint of internal medicine. *Jap J Cancer Clinic* 16:574-584, 1970.
5. Barber HRK, Graber EA: *Surgical Disease in Pregnancy*. Philadelphia, W.B. Saunders Co, 1974, pp 128-131.

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

Examinations for Medical Licensure

Since 1915 the National Board of Medical Examiners (NBME) has produced examinations leading to licensure and recertification. Parts I and II of the National Boards were developed to reflect what is being taught in undergraduate medical education; consequently these examinations now focus on the assessment of educational achievement in both basic and clinical sciences. Part III has evolved as a one-day comprehensive examination of additional aspects of clinical competence. NBME certification depends upon satisfactory completion of all three parts of the examination plus validation of the student's medical school record, and a year of supervised training in an approved residency program.

At the present time more than three-quarters of all U.S. medical graduates are qualified for licensure in any of 48 states by passing Parts I, II, and III and receiving NBME certification. Each candidate, by virtue of his graduation from a U.S. medical school, has been subjected to a day-to-day evaluation by the medical faculty over an extensive period of time. Each candidate also has been subjected to a personal and performance evaluation by the residency program director for a year. These appraisals, plus the passage of the examinations, would seem to provide adequate safeguards.

In 1968 the Federation Licensing Examination (FLEX) was administered for the first time. It was developed to achieve a greater national uniformity and interstate mobility of physicians through reciprocity, and hence has become the predominant route for licensure of foreign medical graduates (FMGs).

Graduates of U.S. medical schools who do not take the NBME route to licensure, now must pass the FLEX examination. They, too, have been subjected to detailed evaluation by a medical faculty prior to graduation. In 13 states, such graduates are eligible to sit for the FLEX examination without having any residency training or further evaluation in such a program.

In order to be eligible for appointment to a residency program, graduates of foreign medical schools must receive the ECFMG certificate which attests to the passing of either the ECFMG examination or the

VISA Qualifying Examination (VQE), plus validation of medical school records, including satisfactory completion of the curriculum required for medical licensure in the nation in which the candidate has studied, and a certain level of competence in the English language. The size of the student body and the educational format and customs in most foreign medical schools make it difficult to know what opportunities exist for a personal evaluation of the student by the medical faculty. However, only 31 licensing jurisdictions require FMGs to have either one or two years of training in an approved residency program as a prerequisite for admission to the licensing examination. All but three licensing jurisdictions require one or more years of residency training in the United States before being licensed, thus providing for an extensive period of personal performance evaluation. A diagram of the present licensure routes for USMGs, FMGs, and USFMGs is presented in Figure 1.

In 1973 the Goals and Priorities Committee (GAP) of the NBME made public its recommendations for the future of NBME activities over the next ten years. This committee advocated a uniform mechanism to evaluate interns and residents prior to their authorization to take care of patients. In viewing the continuum of medical education, the GAP Committee postulated the need for additional evaluation by means of an external examination of candidates at the time of entry into graduate medical education ("Qualifying-A" Exam), now known as the Comprehensive Qualifying Examination (CQE) or FLEX I, which, if passed, would open the door to a limited licensure to practice in a supervised environment in an approved graduate program.

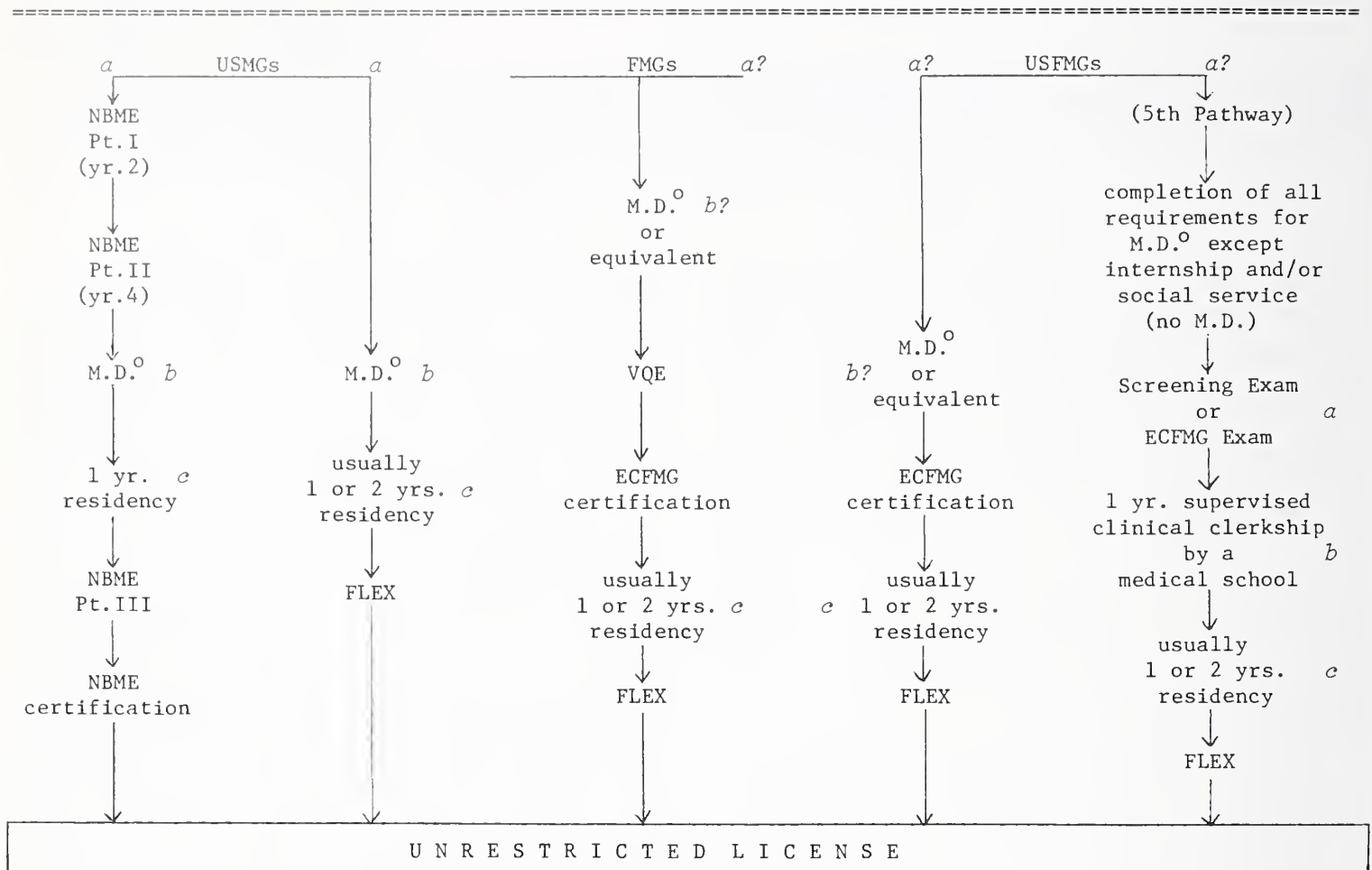
The GAP Committee next proposed that unrestricted licensure for independent practice be delayed until the completion of residency education and after passing another examination aimed at assessing clinical competence in the specialty, "Qualifying-B Exam." Since then the plan has been modified to have Qualifying-B replaced by FLEX II, which would assess clinical competence on a broad (nonspecialty) basis.

Although much controversy still exists since the development of this plan, at the request of the Federation of State Medical Boards (FSMB) the CQE examination (FLEX I) has been developed, and is now being field tested by the NBME for validation. Work

This is Council on Medical Education Report A. Past House Action: I-80:241,243; A-80:99-104; I-79:116-121.

FIGURE 1

EXISTING REQUIREMENTS FOR LICENSURE



a - Evaluation by medical faculty for admission

b - Evaluation by medical faculty for graduation

c - Evaluation by residency program director (not required for licensure by every state)

on the FLEX II examination has not yet begun.

Proponents of the FLEX I and II concept believe that a single, uniform, minimal standard for licensure of physicians to practice in this country is not only desirable but necessary. They point to the multiple pathways to licensure (Fig. 1) which now exist for physicians with different educational backgrounds, and cite inequities among these pathways. For example, it has been stated that the FLEX examination has standards related to but clearly lower than those set for the National Board examinations (*N Engl J Med* 103:1356-1357, 1980). The VQE is a screening examination for alien FMGs to obtain a visa to enter the United States; USFMGs are not required to take it.

Opponents of the proposed new system argue that the present system has proved adequate and that change is not indicated. They claim that imposing FLEX I and II would supersede the *existing* system which has the necessary *safeguards*, and also would supersede the inherent responsibilities of the medical faculty and the residency program directors conducting educational programs accredited by recognized

national accrediting entities (LCME and ACGME) to evaluate their students and residents on a day-to-day basis over a period of years. No set of examinations, they believe, can compare favorably with such an extensive evaluation mechanism as now exists. Furthermore, they question whether any examination can measure clinical competence or performance adequately.

Although the FSMB believes that FLEX I will strengthen basic sciences, and plans to integrate basic science into the clinical problems faced by residents in training, the basic scientists in the medical schools are apprehensive over the possibility that elimination of NBME Part I will lead to depreciation of a broad basic science education for clinical medicine. Medical faculty members claim that the CQE (FLEX I) cannot be a comprehensive evaluation of the entirety of basic medical sciences as the present NBME Part I is designed to be. They believe that a marked decline in the use of Part I will create pressures (first, by medical students, who will see the basic sciences as less essential medical knowledge, and, secondly, by state

legislatures, which will be less interested in funding medical education) to decrease the basic sciences component of the curriculum, thus reducing the quality of the end product.

One of the unresolved issues at this time is the fate of the person who graduates with an M.D. degree and then fails FLEX I. He/she cannot enter into residency training, but whose responsibility is it to correct his/her deficiencies, and how is this to be done?

Some have asked whether FLEX I and II are necessary with the reduction in the numbers of immigrating FMGs. FLEX I and II are regarded by FSMB to be an external standard for licensure essential both to the medical school and to the public. If the concept of FLEX I and II is valid, they hold that it is just as important for U.S. and Canadian medical school graduates as it is for FMGs. Although the privilege of selecting and appointing residents for training in their own programs is the responsibility of each program director, many people favor a uniform minimal standard for all physicians entering residency training. Others ask if FLEX II is necessary in light of specialty board certification. And will FLEX II compete with the specialty boards, decreasing their importance? FLEX II as now conceived would be a broadly based examination for the assessment of clinical competence, and would not be specialty oriented, according to FSMB.

Further information regarding the content of FLEX I and II, or a thorough review of what will actually be covered in these examinations, may facilitate reasonable decisions on these issues. At this time it is also impossible to assess the costs involved in changing the systems.

As individual state examinations gradually gave way to the National Board examinations and most recently to FLEX, significant progress has been made toward a uniform minimal examination standard for licensure. A review of the figures included in this report will indicate both the progress made to date and the opportunity and the need for further progress in this area toward this standard. Although licensure is a prerogative of the individual states, it is difficult to deny the desirability of the individual licensing jurisdictions voluntarily subscribing to, and implementing, a single uniform minimal standard for examinations leading to medical licensure in the United States.

There are alternatives (*for licensure only, and not for entrance into residency training*) to the FLEX I and II concept which will achieve the same goal and in a shorter time with less expense:

- *Alternative I*—The FSMB and its constituent boards, while maintaining and exercising their individual rights to establish minimal acceptable scores, could require that all candidates for licensure must successfully pass all three parts of the NBME examination. NBME examinations are not available to graduates of foreign medical schools at the present

time, but that is a policy which could be changed. The administration of Part I for USMGs could be delayed and given at the same time as Part II, thus equalizing the time between basic science education and the examination for both USMGs and FMGs; or an equalization factor for a differential time lapse could be incorporated in the weighted scoring mechanism. However, delaying Part I until graduation from medical school would strengthen the continuing instruction, carry-over, and review in the basic sciences throughout the clinical years—a goal long desired by medical educators.

A further advantage exists in this proposal because full and unrestricted licensure would not be granted until after at least one year of graduate medical education, during which time the candidate for licensure would undergo a thorough, day-to-day evaluation by the faculty of the residency program. This would necessitate changes in the laws and regulations of 13 states, which still continue to make full licensure available upon receipt of the M.D. degree and passage of FLEX. Two of the 13 states now have changes under consideration which would require a year or more of graduate medical education for admission to the FLEX examination.

Acceptance of Alternative I also would avoid the long time lapse and cost involved in developing, field testing, and validating FLEX II.

For those medical schools that now rely upon passage of NBME Part I for promotion of students into the clinical years, an examination comparable to or, indeed, equivalent to Part I could be made available by the NBME from the same pool of questions.

- *Alternative II*—FSMB and its constituent boards could request NBME to develop an examination which would be equivalent to Parts I, II and III of the National Board examinations in coverage, in difficulty, and in scoring standards for all candidates for licensure in the United States. This examination also should be given after at least one year of graduate medical education.

- *Alternative III*—FSMB and its constituent boards could require Alternative I of all USMGs, and Alternative II for all USFMGs and alien FMGs for licensure.

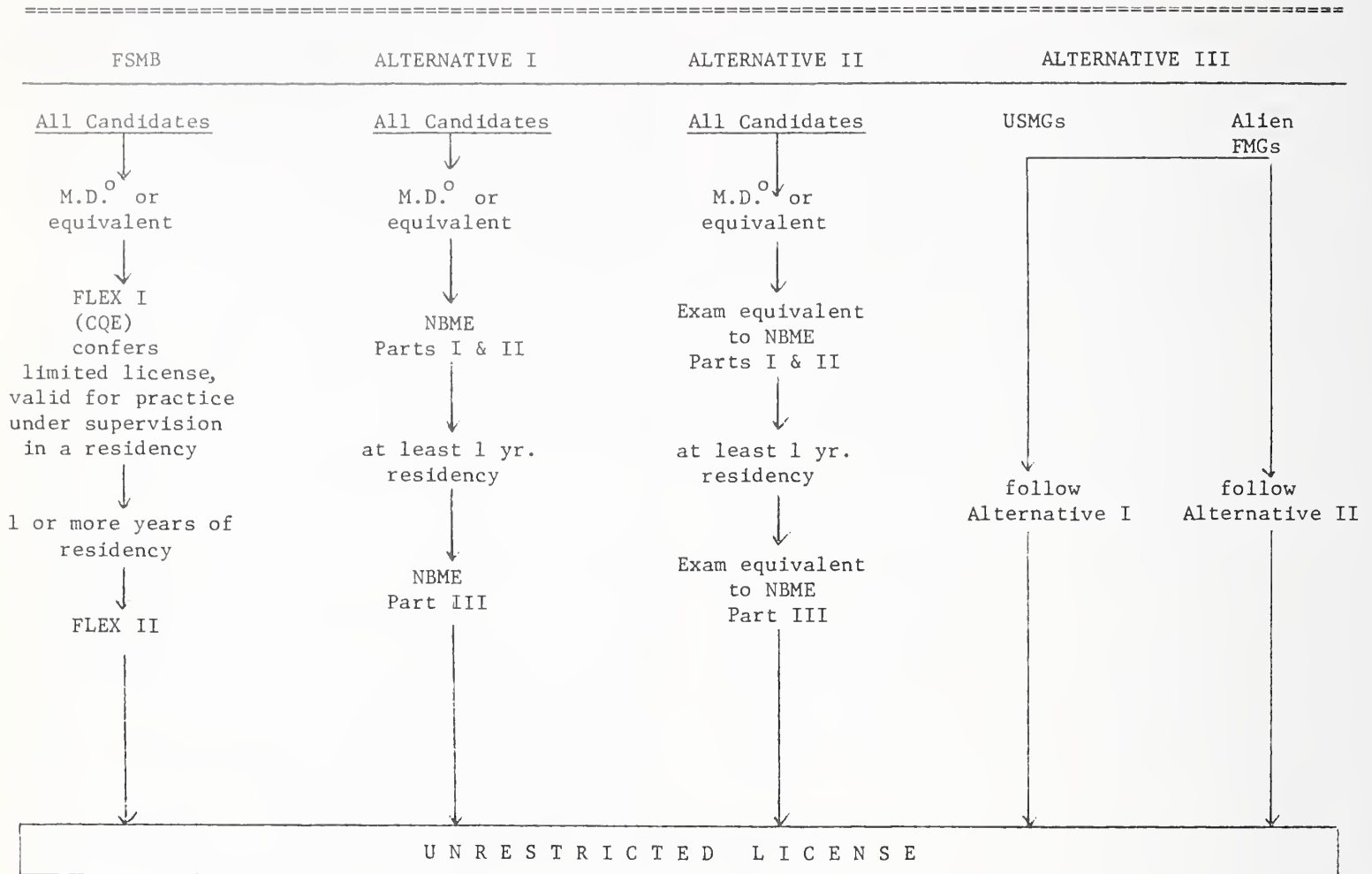
Figure 2 depicts the FSMB proposal and the three alternative proposals for licensure.

Although there is substantially little difference between Alternatives I and II, Alternative I is probably to be preferred because it would involve the National Board examinations by that name—these examinations are widely recognized and respected for their high quality and standards—and also because fewer changes in laws and regulations would be required.

A single screening examination for admission of USFMGs and alien FMGs to residency training in the United States could be developed, preferably by modification of the ECFMG examination, if a screening

FIGURE 2

PROPOSED REQUIREMENTS FOR LICENSURE

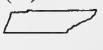


examination is desirable prior to Parts I and II or their equivalents. Regardless of their heritage and educational background, candidates for residency training should not be admitted under more than one standard.

Neither Alternative I, II, or III would penalize the FSMB and the NBME for their efforts in development of the CQE. Questions for CQE could be incorporated in updated and revised versions of the NBME examinations, as in Alternative I, or in the equivalent examinations, as in Alternative II.

The timing for such changes as proposed in Alternatives I and II is particularly propitious now: (1) both the AMA and the AAMC are embarked upon a review of the structure and content of medical education, particularly addressing among many other problems

the interface of undergraduate and graduate medical education; (2) the immigration of alien FMGs is decreasing; (3) the number of USFMGs is increasing, and many are returning from institutions with faculties, facilities, and educational standards that are not comparable to U.S. medical schools; (4) the previously medically underserved areas of the United States are being rapidly populated by physicians; and (5) the qualifications of those admitted to medical practice are a growing public concern.

The Council on Medical Education, therefore, recommends that: (1) medical school faculties and residency program directors continue to exercise the responsibilities inherent in their positions for evaluation of students and residents respectively; and (2) the concept of FLEX I—FLEX II be opposed. 

Environmental Analysis

The Council on Long Range Planning and Development has been pursuing a general analysis of the environment within which the AMA and other medical organizations will exist in the near and long term future.

I. Introduction

During the past year, the AMA Council on Long Range Planning and Development has devoted considerable time and effort to pursuing a systematic evaluation of the environment within which physicians will practice in the future. This activity is part of an overall effort to identify issues early so they can be addressed analytically and thoughtfully rather than on a crisis basis at a later time.

In the process of conducting this environmental analysis, the Council has reviewed a number of broad areas and has identified certain trends and patterns that may be of interest to others. This document presents an overview of the Council's work and identifies some general themes (Section I). Sections II through VII present general information in six selected areas; the economy, population, regulation, legal environment, physician manpower, and medical technology, respectively. These, of course, are not the only environments which are impacting on medicine, and the Council will be reviewing more of these environments, widening the scope of its inquiry and refining its analyses in the coming years.

The information in this document represents the collective observations of the members of the Council on Long Range Planning and Development and is not intended to be presented as current or proposed AMA policy.

Summary and General Themes

Emerging from the analysis are several major themes which the federation should take into consideration.

1. *Competition.* An increased sense of competition will be a key concept in the coming years in several contexts. Medical organizations will increasingly have to compete for dues dollars. Physicians will be faced with increased competition both from other medical practitioners and from nonmedical providers. There is also likely to be increased competition among types of medical delivery systems as physicians continue to seek out group and salaried type arrangements. This trend may be reinforced through the so-called pro-competition bills currently being discussed.

2. *Regulation and Legal Restraint on Medical Practice.* It appears that the "antiregulatory" sentiment of the past several years may be slow in reaching the health care industry unless the industry exerts some initiative. In the absence of such initiative, physicians may find themselves subject to increasing regulation, restraints on their practices, and limitation on their uses of technology, coming from a wider variety of sources including state governments, third party payors and hospitals. In addition, the legal system will continue to place restraints on physician practice modes, on relationships with patients, and on relationships with other professions and institutions.

3. *Cooperation.* In all of the environmental areas considered, perhaps the key factor that emerged was the crucial need for a unified profession and for a coordinated federation approach to problem solving. If organized medicine is to continue its leadership role, it will have to meet its problems and concerns head on. The medical profession will have to be on the leading edge in identifying the crucial issues and responding to them in a pro-active and responsible fashion which considers professional as well as public concerns. In an age of limited financial and other resources, the medical profession simply cannot afford to have organizations working at cross purposes or duplicating their efforts. Central to this cooperative effort is a strong national organization that can provide support to state, county, and specialty societies while at the same time maintaining a major leadership presence at the national level.

II. The Economy

Long-term trends and fluctuations in the general economic condition are of prime importance to the federation for several key reasons:

1. *Organized medicine must compete for physicians' dues dollars.* The degree of this competition will tend to increase with slower rates of economic growth and with greater rates of inflation. To the extent that inflation increases the real price of "necessities," physicians may tend to view dues in professional organizations as a "luxury" that might easily be foregone. In worsening economic conditions, it becomes increasingly difficult to increase a revenue income base that is basically dues dependent.

2. *Non-dues revenue bases are also directly affected by general economic conditions.* For example, journal advertising revenues tend to be highly sensitive to economic styles.

3. *Increased inflation has a direct depressing effect on medical societies' "real" levels of activity.* New programs can only be instituted at the expense of existing programs and this may have significant implica-

This is Council on Long Range Planning and Development Report D.

tions for the federation's ability to respond quickly and effectively in a dynamic environment.

The Economy in 1980 and Outlook for 1981 and 1982

Of course, the major economic story of the late 1970s and continuing in 1980 has been the unprecedented high rates of inflation. Consumer prices increased 4.8% in 1976, 6.8% in 1977, 9.0% in 1978, 13.3% in 1979, and by a slightly lower but still historically high 12.4% in 1980.¹ Given this trend, it is not surprising that efforts to decrease inflation will remain a primary national policy objective.

Given the wide gyrations that have occurred in the economy over the last 12 months, coupled with a great deal of uncertainty over the potential for immediate effect of the new administration's policies, it is extremely difficult to project inflation rates for the coming year. Even if the series of tax cut and budget cutting efforts currently being considered are implemented, it will be some time before the effects are realized. In particular, pressures on the federal budget will be extremely high as increased funds will be needed to pay off the rapidly increasing federal deficit at historically high interest rates.

However, at the same time there are signs that the rate of inflation may be decreasing in the short term. For example, a large portion of the late 1970s inflation was due to large increases in the prices of energy. In 1979, energy prices increased nearly 37% and alone added over 3 points to the 13.3% rise in the price level.² These increases in energy prices took some time to work their way through the system as they were institutionalized into cost-of-living contracts, etc. and will continue to be felt for some time. But such relatively large increases in energy are not as likely in the future. It is more likely that energy prices will increase at about the same rate as all other prices. In addition, in 1981, productivity levels should increase substantially, as much productive capacity idled during the recent recession is put back into operation. These major forces point to an inflation rate for 1981 of less than the 1980 rate but still high by historical standards, possibly in the 10.5% to 11% range.³ The reduced rate of inflation will be accompanied, and reinforced, by generally falling interest rates.

In 1980, the growth rate of the U. S. economy was -0.3%. It is generally agreed that 1981 will show growth of about 1%, recovering to a 2% rate by the end of 1981.³ This significant change in growth, combined with increases in the labor force, will initially increase unemployment from its 5.9% level in 1979 to nearly 8% in 1981, but declining by year end.³ While the increase in unemployment could normally be expected to exert downward pressure on inflation, this factor will be offset some by increases in unemployment insurance benefits, welfare program payments, etc., which tend to increase the federal budget deficit. *In short, the outlook for 1981-82 is one of continued high (although declining) inflation, positive but slow economic growth, and overall increased unemployment.*

Scenario Beyond 1981

Despite the somewhat gloomy outlook for 1981, there are several major trends and influences in opera-

tion which foretell a significantly improved situation in the remainder of the decade. Several of these factors are:

1. Shifts in demographics mean that the labor force will be made of more highly trained and better educated individuals. This should have a major positive impact on sorely lagging productivity trends. The large investment in education this country made in the 1950s and 1960s will begin to pay off.

2. As the labor force becomes more "employable," society will have to devote fewer of its resources to unemployment insurance payments, social welfare programs and other entitlement programs. Higher employment levels also imply fewer expenditures for legal enforcement which tends to be associated with high levels of unemployment. The shifting age distribution also implies a lower percentage of total resources going toward education. In short, there will be fewer expenditures for existing social programs.

3. Movements toward increasing energy self-sufficiency and alternative energy sources, which should accelerate greatly in the 1980s, will pay high dividends by decreasing the total share of resources going toward energy, and will thus have the effect of slowing inflation.

4. Current trends toward regulatory reform (which will accelerate under the new administration) will have a positive effect on productivity levels.

5. Government's increasing recognition that innovative and direct policies are needed to stimulate capital formation should increase the rate of investment in the economy, again having major positive impacts on faltering productivity trends.

These basic trends draw a scenario for the 1980s which might be termed "reasonably optimistic." While these trends will not return the economy to the performance levels of the mid and late 1960s, it should do substantially better than in the 1970s.

It is estimated that under these optimistic assumptions, the economy could achieve real economic growth in the 3% to 4% range.⁴ Over the decade, this growth rate implies a 40% increase in real growth, which, combined with a population increase of 10%, *implies an increase of 28% in real income per capita in 1989 over 1979. The combination of the above factors could reduce inflation to a 7% range by the late 1980s.*⁴

Implied in these projections is a decreased share of national spending originating in the federal sector, which will need to be accomplished gradually over the decade.

General Implications for the Federation

In the near term, these economic conditions suggest a continuation and even acceleration of prudent fiscal management on the part of all medical associations. The major economic problem for the foreseeable future will continue to be inflationary pressures, and medical societies will have to be careful not to expand programmatic activities beyond reasonable estimates of dues and non-dues revenue sources. It is also likely that, in the near term, non-dues sources of revenue will take on greater importance for many associations than in the past.

Even with an increased emphasis on fiscal manage-

ment, it is likely that some medical societies (particularly the smaller county societies) will be extremely "hard hit" by the economic conditions of the next several years. The combination of increased competition for dues dollars, slowly growing membership and rapidly escalating operating costs may threaten the financial stability of some societies. The federation will need to be carefully attuned to such circumstances.

The prospects for changes in the level and composition of federal expenditures provide both opportunities and challenges for the medical profession. As mentioned above, for this scenario to be realized, real federal expenditures will have to decline and this most likely means fewer real dollars for entitlement programs, including health care. Although this trend lessens the possibility of major new health programs, controversies will continue to develop among various groups as they face a "pie which is decreasing in size." With specific respect to health care programs, a re-orientation of focus from the federal to the state level will place new and greatly increased responsibilities on state and local medical organizations. The need for coordination at the national level will be stronger than ever.

Reductions in federal expenditures also imply continuing efforts toward cost containment in the health field. While regulation will continue to be one major approach, associations will increasingly be faced with responding to development of the so-called pro-competition bills currently being considered.

III. The Population

One of the most important societal shifts that will occur in the next decade is the change in the population age distribution. As the age distribution shifts, major changes will occur in income and consumption patterns which will have repercussions on many economic and social institutions. In addition to the gross effects on society in general, changes in population will affect the medical profession in at least two important ways: (1) Overall changes in the population imply changes in the *level* of demand for health care services in general physicians' services in particular. (2) Changes in population characteristics will have implications for the *kinds* of physicians' services that consumers tend to demand.

Basic Trends and Outlook

The most obvious change that will occur in the next decade is the aging of the population. In 1979, the median age in the United States was 28 years. By 1982, the median age will be 30, and it will increase to 35 by the year 2000.⁵ Overall, the population (which will increase by about 8% to 240 million people by 1990) will become more mature and less "youth oriented."

However, of even greater importance than this gradual aging of the population is the "roller coaster" way in which this aging will occur. The upward age march will not be one of orderly progression; rather, society will go through several abrupt changes in age distribution arising from changes in birth rates which occurred many years ago.

In the past 50 years there have been three major shifts in population birth rates. The first major shift

occurred in the "depression era" when average yearly births declined from about 3 million to 2.5 million per year. The fertility rate declined to 2.1. The next major shift was the "baby boom" of the postwar era, which saw the number of births increase to nearly 4 million per year and the fertility rate climb to 3.8. The third major shift, sometimes referred to as the "baby bust" of the mid-1970s, saw the fertility rate drop to about 1.7 and births declined to just over 3 million per year.⁶ While the causes of such drastic changes in birth rates are subject to speculation, one thing is certain: the population age structure will go through some significant and rapid changes in the next 20 years. Some highlights of the changes include:

- In the next ten years, the total number of persons under the age of 5 will increase by approximately 35%, moving from the current 8.0% to nearly 10% of the total population. However, beginning in 1990 this group will start to decline by about 2% per year.

- The 18 to 24 year old age group is now slowing sharply and will continue to decline for at least the next 15 years. In absolute numbers this group will decline by 15% over the next ten years.

The 25 to 44 age group will be the most rapidly increasing element of the population over the next 12 years. In total this group will increase by 35%, from 58 million to 78 million by 1990.

- The 45 to 64 year age group will decline slightly until the later half of the 1980s when it will enter a period of rapid growth, increasing from 18% of the population in 1990 to nearly 21% by 2000.

- The total population in the 65 year and over group will continue to grow, but as a percentage of the population will remain steady at about 11% to 12% through the 1990s. But there will be a tremendous increase in this age group as we enter the next decade.

General Implications

In terms of general economic growth and development current trends in the age distribution can be viewed as positive. The increasing proportion of the population taken up by the 25 to 44 age group (who tend to be more employable than the teenagers they will replace) should cause unemployment rates to drop substantially in the early 1980s. The greater experience and higher education of these workers will have positive effects on worker productivity and should ease the pressures on inflation.

In addition, as the 18 to 24 age group declines overall, government spending on education at all levels will fall. Per capita expenditures for law enforcement, which tend to be associated with the under 25 age group and high unemployment, should also decrease, easing pressure on tax rates and freeing up some funds for other types of social or economic development programs.

One negative aspect of the general population trend is that the total available labor supply, which will increase through the mid 1980s, will begin to decline in the late 1980s. The labor force, which is now growing at a rate of 2.3% per year, will slow to about 1.2% per year by 1990. The trend has led some analysts to predict a "labor shortage" for the last half of this decade, which will reinforce any inflationary tendencies. Economic growth will be more difficult to

maintain.

After the year 2000, a new period of economic and social strain will begin as the ratio of workers to non-workers begins to decline more rapidly. However, the exact composition of the labor force will depend on traditionally unpredictable future birth rates.

Implications for Organized Medicine

The major implications of these population trends relate to the effect they will have on the demand for physicians' services. Changes in demand will have major implications for the kinds of services the medical profession and the public will require from organized medicine.

There are several factors which suggest that population trends will, in the near future, lead to an expanded per capita demand for physicians' services.

1. *Greater employment* means that even more of the population will be covered by employer purchased health insurance reimbursement plans. Regardless of the form of such benefits, greater coverage will normally be accompanied by a greater demand for services.

2. *Rising real incomes*, forecast for the next decade, will increase demand as individuals will have increasing amounts of available money to spend on a wide range of goods and services.

3. *Higher education levels* have always been associated with greater utilization of physicians' services. The average level of education will increase dramatically over the next few decades.

4. *The shifting age distribution of the population* should increase overall per capita demand for physicians' services. For instance, there will be an increasing percentage of persons in the 25 to 44 age group who traditionally use more physicians' services than the 17 to 24 age group which they will replace. The greatly increasing proportion of the population under the age of 5, and the slightly increasing proportion 65 and over, also point toward greater per capita utilization.

As a by-product of these changes, there also will be major changes in the way the physicians' services are purchased and in what patients will expect and demand from their physicians. The new consumer group of the coming decade (i.e., the 25 to 44 year old age group) will be different in important respects from the "average" consumer of previous years. The patient of tomorrow will be more highly educated and knowledgeable in all ways, but particularly more educated in consumer activities. Even though per capita real income will rise, consumers will be increasingly discriminating on purchases of all kinds of goods and services.

With regard to demand for physicians' services, the key word will be "more." While *more* services will be demanded overall, it can also be expected that consumers will "shop" *more* carefully and with fewer inhibitions than in the past. They will continue to seek "quick and easy" methods of assessing physicians' qualifications through increased usage of consumer oriented physician directories. Consumers will increasingly demand *more* "input" into physicians' treatments and hold physicians even *more* accountable for treatment outcomes. The ability to do this, of course, relates directly to the total supply of physicians' ser-

vices.

As with many other consumer goods, "convenience" may eventually become more important than real quality. This in turn has implications for the setting (i.e., office versus hospital, solo practice versus multispecialty group) where services will be required and delivered as well as for important changes in the patient-physician relationship.

The major challenges to the medical profession in this regard will be to design programmatic activity to aid the individual practicing physician in recognizing and dealing with these changes while at the same time trying to educate the public about what can "reasonably" be expected from physicians.

IV. The Legal Environment

Economic uncertainty usually stimulates greater legal involvement as society seeks to reach for greater stability. As in past years, there will continue to be greater legal involvement in the practice of medicine. Existing legal problems will continue to impact on physicians while new legal concerns will expand into more areas of medical practice. Both the personal life and the professional life of the physician will be affected by these laws.

One of the more dramatic impacts could relate to the application of "restraint of trade" laws to the medical profession. Although advertising is not widespread at this time, physicians may increase their use of advertising as the practice of medicine changes. But the major impact of the "restraint of trade" laws that relate to competition is still to be felt. Competition within the profession for specialty positions and hospital staff privileges will intensify, as will competition from limited licensed practitioners and allied health professionals, both seeking broader recognition and greater involvement in the health care field. All will be affected by current and anticipated legal decisions.

As noted above, government regulations will continue to exist as long as government health programs are in place and new regulations will inevitably accompany new programs. These regulations will continue to occupy substantial amounts of physicians' time as they seek payment under those programs. Quality review regulations also will increase and physicians will be called upon to participate in peer review, but there also will be pressure for more "public" members of review and planning bodies.

Government regulations also will have an effect upon the degree of confidentiality that can be provided in the physician-patient relationship. As the government requires more information, and as that information is obtained through agencies and intermediaries, consumer demands for information will continue. Laws requiring the provision of such information may be enacted and enforced.

Increasing legal involvement in the practice of medicine may reinforce the trend for physicians to practice in group settings. Physicians will increasingly be involved in private "clinics" with extensive equipment and facilities, requiring a greater investment in both money and service. Thus physicians will become subject to, and will have to become knowledgeable about, many other areas of law including employment laws, laws relating to professional corporations, laws

regarding retirement plans and applicable tax laws. Physicians may have to become more comfortable with sharing organizational and functional responsibilities, while retaining professional responsibility for patient care.

The operation of hospital and similar facilities also will be subject to increasing legal involvement. This may result in more legal problems for physicians as they seek hospital staff privileges. Hospitals may seek different organizational formats that offer greater stability and efficiency. Legal problems may arise as hospitals seek to close departments or entire staffs, and place other limitations on physicians in the hospital.

Finally, professional liability will be a continuing concern for all physicians. The increased use of new technology and the development of new scientific advances will continue to alter the standards of care. Despite cost containment efforts, society will expect a full range of scientific technology to be available for the benefit of the patient, and the physician's failure to utilize it may be considered to be malpractice. With an increasing physician population, disciplinary action against physicians may increase, and a malpractice claim may be examined not only for civil liability to the patient, but also for possible disciplinary action.

Implications for the Federation

Greater legal involvement for physicians, whether at the national, state, local, hospital, or patient level, means that the physician will be requiring increased information and representation. Physicians will need current and extensive information about how current laws are affecting their daily practices as well as increased representation at all levels to assure that legal activity is resolved consistent with the overriding interest of the profession and of the public.

V. Regulation

The United States is a society based on principles favoring individual freedom and minimal artificial restrictions and regulation. As society became more complex, however, the need for more regulatory activity increased. Until well into the 20th century regulatory activity was developed cautiously in the context of minimizing restrictions on individual freedoms. However, since World War II there has been a rapid rate of growth in regulation, in part responsive to a growing public cynicism toward private sector activity and in part responsive to a social attitude that government should "solve" more of the problems.

However, in the last several years, there is strong evidence that the public has begun to reject the financial price of governmental regulatory actions, and also is very concerned about the social price of increased regulation in the form of decreased freedom to determine one's own destiny. This growth of anti-regulatory sentiment is more predominant in some sectors of society than in others, but it is evident to some degree on a widespread basis. Significantly, politicians, academicians, and the press have given increasingly sophisticated attention to many aspects of regulation. The fact that these discussions have found their way formally into political and legislative arenas (deregulation legislation, deregulation as a political issue, etc.) is an additional indication that it is a force

that is being taken seriously.

In short, perceived public *attitude* has become *institutionalized* to the point where deregulation has become the basis for governmental *action* (deregulation of the airline industry and proposed deregulation of the trucking industry). This is a clear indication that the movement's momentum is growing. Trends in regulation have implications for organized medicine for three primary reasons: (1) The physician population is being constantly constrained by regulatory activity that has mounting implications for individual office practices. (2) Organized medicine's responsibility to the public includes concern that regulation improve rather than inhibit the health delivery process and its efficacy. (3) The medical profession is, in itself, a supporter of self-regulating forces in the health care field.

Current Trends

Regulation has indeed been "a growth industry" in recent times. In just two years, between 1974 and 1976, federal expenditures for regulation of business increased 148%. Between 1955 and 1975 the number of pages published annually in the *Federal Register* (an often-used measure of proliferation of regulations) increased by 600% to 60,000 pages annually.

The increase in the amount of regulation would in itself be sufficient to generate attention, but to a large extent it is the *type* of regulation that has caused the greatest concern. Since the mid 1970s there has been a shift from the traditional model: a shift from industry-specific economic regulation to social regulation. As described by Murray L. Widenbaum⁷: "In the traditional notion of government regulation, a federal commission is established to regulate a specific industry, with the related concern of promoting the well-being of that industry. Although that type of federal regulation of business surely may continue, *the new regulatory efforts established by the Congress in recent years generally follow a fundamentally different pattern, much broader in scope*. In the cases of the Environmental Protection Agency, the Consumer Product Safety Commission, the Federal Energy Administration, and others, the regulatory agency is not limited to a single industry. *Their jurisdictions extend to the bulk of the private sector, and, at times, to the public sector as well.*"

This shift in emphasis in regulatory activities is having profound influences on the economy in ways that are only now being recognized. While many of the regulations provide potential positive benefits—cleaner air, safer working conditions, etc.—there are substantial public and private costs associated with them. The level of such costs (loss in productivity, inflation, reduction of technological innovation, etc.) have begun to raise serious doubts as to whether the social benefits of regulation outweigh the social costs.

The Cost of Regulation

The increasing concern over the cost-benefit relationship of regulation has led to several attempts to estimate the dollar costs of regulation. While most of the studies suffer from lack of complete data and imperfect methodologies, the results generally indicate that the costs of regulation are very substantial.

Based on a review of various cost estimates, the

direct costs of federal regulation seem to be between \$80 billion and \$140 billion annually. The secondary or indirect costs of regulation, which some analysts believe may be even greater than the direct costs, would place the total significantly higher.

Public Attitudes

A recent article in *Public Opinion* summarizes much of the research of the public's attitude toward government regulation of business. The following sequence of points, quoted directly from the article, represent a thought process that characterizes the public's concern and confusion about regulation⁸:

- For over four decades, Americans have been ambivalent in their attitudes toward regulation. A majority has said they opposed greater regulation, but over the years—as more and more regulation has been enacted—a majority has also voiced approval of existing regulations and indicated that it did not want to roll back the tide.

- In the past two years, the intense criticism of excessive governmental regulation expressed by business, as well as by many in government and academe, apparently has had some effect. Recent surveys suggest slightly less public support for regulation than in the past. Nonetheless, it remains true today that government regulation of many aspects of business activity is widely accepted and even popular.

- The essential reason why people support government regulation is not that they have lost faith in free enterprise. To the contrary, public belief in the principles of private competition remains remarkably strong. The public sees government regulation more often as a way of preserving free enterprise, not restraining it, against monopolistic corporate power. What people are asking is that government act as watchdog over business to make sure business does not abuse free enterprise and exploit its powerful position in society.

- The public is certainly not convinced that government regulation is the ideal way to curb business abuses. They are wary of too much power over business, since government, too, is often irresponsible and abusive.

- The public would prefer to rely on consumers, consumer activists, and self-regulation by business. But they are also certain that business will not regulate itself and that consumers lack sufficient power to act as a check on business. Thus, in the absence of better alternatives, they turn to government regulations as the only answer.

In summary, the public perceives the need to be protected, and clings to government regulation to a certain degree as the most familiar way to assure such protection, probably because it is not aware of any alternatives. However, the public is clearly not universally satisfied with either the substantive results or the high cost and would prefer a private sector solution.

Various public opinion research findings further support the above conclusions:

- A majority of the public consistently says that government regulation of business increases inflation (Yankelovich, 1975, 1976, 1977, 1978; ORC, 1978).

- A large majority (over 80%) believes that conforming to government standards involves extra

spending for business and that these costs are passed along to consumers (Yankelovich, 1975, 1976, 1977, 1978).

- A majority (51% to 37%) also believes that money spent by companies in meeting government requirements “has significantly reduced the amount business can invest in expansion and modernization of plant and equipment” (ORC, 1978).

- The proportion believing that “government activity to protect the environment and consumers” increases inflation has hovered around 50% from 1975 to 1978, while a smaller number, between 14% and 23%, believe it does not do so (Yankelovich, 1975, 1976, 1977, 1978).

- Declining numbers now believe that regulation is “a good way of making business more responsive to people's needs.” In 1973, 60% professed such a belief; in 1978, 50% agreed (ORC surveys, 1973, 1978).

- There is increasing support for the belief that “competition is better than government regulation to make sure the public gets what it pays for.” In 1976, 70% agreed; in 1977, 73% held this view (U. S. News & World Report).

- The percentage believing that the federal government would be very effective if it were “given the main job of trying to regulate business and enforce standards of product quality and reliability” has fallen steadily from 25% in 1972 to 20% in 1975, 16% in 1976, and 15% in 1978 (Harris).

- There also is growing fear that regulations are encroaching too far on free enterprise. In 1964, when respondents were offered the argument that “the government has gone too far in regulating business and interfering with the free enterprise system,” there was narrow agreement, 42% to 39%. When the identical question was posed in 1978, agreement had widened to 58% to 31% (Gallup, 1964; CBS, New York Times, 1978).

- While 62% of the public believe that significant benefits are received from government regulations, only 52% believe that the benefits outweigh the costs of regulations.

The conclusion seems obvious: if a credible private sector solution were available and properly presented, it would meet a public market.

Implications for the Medical Profession

The above description of attitudes and regulatory reform is symptomatic of an ever-changing regulatory environment. As the public and business communities become more aware of and more concerned with the costs of regulation, there will be mounting pressure on government officials to implement regulatory reform proposals. However, during this period of transition, reform will not necessarily apply to all industries equally.

A recent article in *Medical Economics*⁹ outlines the prospects for regulatory reform in medical care. While there are some indications that support for sweeping regulatory proposals may be dwindling (e.g., setbacks for hospital cost controls, reduced funding for the PSRO program, greatly reduced possibilities for comprehensive national health insurance), a new “wave” of selective regulatory controls of physicians may be emerging. In particular the government will be look-

ing for ways to reduce individual physicians' discretion in delivering medical services deemed as "too costly" through the current third party reimbursement mechanisms. Prospects of certificate-of-need legislation for physicians' offices and negotiated fee schedules for Medicare and Medicaid represent additional intrusions of government in physicians' office practices. This trend, combined with existing incentives for development and operation of HMOs, further implies that any new "wave" of regulation will be most severely felt by the fee-for-service physician.

Thus, while efforts to deregulate the economy in general may be increasing, there is some evidence to suggest that this trend may be slower in reaching health care unless the medical profession and others in the health care sector take the initiative to see that health deregulation is pursued along with the general deregulatory trend. Many new government initiatives, particularly in the area of alternative delivery systems and reimbursement methods, will attempt to impose new regulatory burdens on the health care system and will be aimed at particular groups of physicians. These pressures may be very well increased in the coming years and will be increasingly administered at the state or local levels. Efforts to monitor and analyze the trends and consequences of the current regulatory environment, as well as to provide specific information to individual physicians at the local level to assist them in dealing with regulatory problems, will become increasingly important. It will also become increasingly important for the profession to develop, experiment, and sponsor specific private sector alternatives to government regulation whenever possible.

VI. Physician Manpower

While the general population is growing at historically low rates, the physician population will grow rapidly in the next decade. The total population is expected to increase by 8% to 10% by 1990, while the number of active physicians will increase by twice that rate to approximately 536,000.¹⁰ As a result, it is estimated that the physician per 100,000 population ratio will grow from its 1978 value of 171 to 220 by 1990, an increase of 28%.¹⁰ This is nearly double the 1960 ratio. In short, we are moving into a new period in history where the available supply of physicians' services will be relatively abundant. The impacts of these trends are likely to be substantial.

Specialty Distribution

Due to changes in the structure of residency programs over the past several years, the growth in physicians will not be uniform over the specialties.

- The fast-growing fields will be in primary care. Family practice, general internal medicine, and general pediatrics—which now represent 38% of all practicing physicians—will increase to over 42% by 1990.

- "Other" medical specialties—dermatology, pediatric allergy, pediatric cardiology, and internal medicine subspecialties—will increase from 5% of practicing physicians to slightly over 7%.

- Surgical specialties will show the greatest relative decline. These specialties, which now account for 28% of all physicians, will decline to 23% in the next decade. The growth in absolute numbers of surgical spe-

cialists, while not growing nearly as fast as the number of primary care physicians, will still, however, outpace the increase in general population.

Other Characteristics

By 1990, there will also be the following changes in the physician population:

- The percentage of female physicians will increase from its current level of 11% to nearly 17%.

- The percentage of foreign medical graduates will fall from current level of 20% to about 18%.

- As compared with the general population, which is slowly aging, the physician population is getting younger. In 1977, over one fourth of all physicians were under 35 years of age. By 1990, over 40% of all practicing physicians will have received graduate medical training since 1979.

General Implications

As the physician population continues to grow at a faster rate than the general population, and as the general population age groups shift, certain kinds of medical specialists will be relatively abundant. Based on "adjusted-need" estimates in the recent and controversial GMENAC study, certain specialties, particularly general pediatrics, obstetrics-gynecology, ophthalmology and several other surgical specialties, will be particularly affected. Setting aside the difficult questions relative to the GMENAC methodology and the appropriate policy response to such findings, one thing that can be predicted is that certain pressures will continue to develop as the number of physicians increase.

In general, the increasing supply of physicians relative to the population will have significant impact on medical practice, since increased competition can be expected. In recent years, physicians' incomes have declined both in real terms and relative to the income of the general population. This trend can be expected to continue as the supply of physicians continues to increase. For example, in 1979 there were an additional 25,000 physicians providing patient care services over the 1978 level. During this period, patient volume per physician declined by over 9%.¹¹ This decline in patient volume occurs at a time when physicians' fee increases are generally trailing the overall rate of inflation.

As pressures of this sort continue to mount, physicians will seek practice arrangements where more stable patient volumes can be expected. This implies more physicians seeking salaried type arrangements (both hospital and group based) and a continued movement away from the traditional fee-for-service practice, especially in solo settings. It is estimated that currently 50,000 practicing U. S. physicians (15%) have already established some affiliation with a prepaid health plan, and this number could reach as many as 125,000 by 1990. In some areas of the country, 75% of practicing physicians are now involved in some sort of prepaid practice arrangement.¹² This trend will be particularly pronounced among younger physicians, who will continue to have increasingly difficult times in establishing a traditional medical practice.

While physicians may perceive salaried type arrangements as protecting them from swings in the

economic environment, in the long run the incomes of salaried physicians will come under the same supply and demand pressures as that of fee-for-service physicians. As this happens, there may develop pressures to participate in organized negotiating activity.

The increasing number of physicians also will place limits on location choices. Physicians who would prefer to locate near medical complexes, with access to the newest technologies, will face increasing pressures to locate in areas where access to certain facilities is much reduced. Stricter state licensing requirements, decreases in reciprocity agreements, and greater pressure for limiting licensing can all be expected.

Implications for the Federation

These broad trends in physician manpower also have the following implications for the medical profession:

1. The increased total number of physicians will lead to increased membership in organized medicine over time. Even if the AMA only maintains its current market share, the growth in the physician population in the next ten years would provide an additional 34,000 full dues paying members at the national level, an increase of some 22%.

2. The fact that the physician population is getting younger should be advantageous. As mentioned above, by 1990, 40% of practicing physicians will have had graduate training since 1979. Recent emphasis on the resident and student programs should pay high dividends in terms of future physician members, and will continue to be extremely important.

3. In the last few years, the profession has made important strides toward incorporating women physicians into organized medicine. As the percentage of women physicians continues to increase, such efforts will gain continued importance.

4. The changing specialty mix of physicians implies that the structure of specialty societies (which represent them) will be changing. More specifically, some of the primary care specialty societies will increase in relative membership strength while some of the surgical specialty societies will decline in relative membership strength. New specialty societies will come into existence reflecting the trend toward increased specialization.

5. Conflicts between medicine and nonmedical providers will continue to escalate. Some specialty societies (particularly the smaller ones), forced to engage in controversy with nonmedical organizations, will require assistance from larger medical organizations.

6. The predicted continued movement toward salaried and group practice presents special challenges for organized medicine. Increased efforts will be needed to assure that the benefits of membership in organized medicine are attractive to salaried and group physicians while at the same time continuing to provide the traditional services to the solo fee-for-service physician.

7. Competitive pressures will be particularly great for general and family practitioners. Pressures may develop for ancillary personnel to assume more of the routine patient care activities, and at the same time the increasing number of specialists may reduce the

amount of more complex medical care services required of generalists. Many general practitioners may assume more of the referral roles for patient care services.

8. Movements toward more negotiating activity continue to develop, and the federation should continue to review its options on formal negotiation activities.

VII. Medical Technology

Medical science and technology continue to develop at a rapid rate. The impact of technology on the process of delivering personal medical care services has emerged as an extremely difficult and important issue as more specialization becomes necessary to utilize the more sophisticated technology. It is becoming increasingly difficult for both scientists and practitioners to keep current with new developments and their proper uses. Time demands on practitioners are becoming excessive as time for patient care competes with time necessary to keep abreast of the latest treatment technologies. The use of complex technologies also has implications for the future of the personal relationships between patients and physicians.

Increases in technology imply greater, but perhaps more limited, training periods for physicians and thus contribute to the ever-increasing rates of specialization. As physicians become more dependent on advanced technology to practice their specialty, they will in turn become more dependent on large medical centers for providing the various technologies, as well as on medical technicians for highly specialized assistance.

These factors have become additionally complicated by a widespread notion among health planners and other health policymakers that technology is, in itself, a major culprit in the increasing costs of medical care. Pressures have developed to limit or control the development and diffusion of certain technologies as a method of health care cost containment. The effort to limit the number of CT scanners is perhaps the most publicized, but only one of many examples of these pressures.

With respect to the practicing physician, the questions of medical technology will continue to arise in the context of three major policy arenas: placement review, utilization review, and technology assessment. In the area of placement review, there may be continued or increased efforts to expand certificate-of-need (CON) legislation to cover major portions of physicians' office-based practices. Of course, medical facilities, available to physicians in the hospital, will continue to be regulated under CON and Section 1122 restrictions. There will be a continued push toward development of regional medical centers for more and more technologies, and toward the development of more specific criteria for availability and usage.

Utilization review will continue to be pursued in two basic contexts: one, in the continued reliance on PSRO or similar activities to develop standards and review physicians' decisions on ordering certain medical care services, and two, in the form of third party reimbursement restriction on certain medical

(Continued on page 123)

VALLEY PSYCHIATRIC HOSPITAL

... means excellence in quality care.

Valley is a fully accredited private psychiatric hospital staffed by professionals with outstanding credentials in the field of mental health and emotional disorders.

The carefully coordinated team approach includes intensive individual and group psychotherapy, and expressive therapy for the patient whose condition requires evaluation and professional treatment.

Valley is a 100-bed private psychiatric hospital nestled in an 81-acre wooded area on the outskirts of Chattanooga, Tenn. Structured clinical programs include:

ADULT PSYCHIATRIC PROGRAM—Admission to the adult program at Valley involves diagnostic procedures such as complete physical examination, psychological testing, psychiatric evaluation and review of social history. Based upon results of these initial tests, the patient's attending psychiatrist together with members of the psychiatric treatment team develop a total treatment plan which may include group therapy in addition to individual therapy, occupational and recreational therapy as well as family involvement.

Weekly meetings of the treatment team are held to modify the original treatment plan based on the patient's progress while in the hospital.

CHILD AND ADOLESCENT PROGRAM—Valley maintains a child and adolescent program for youngsters undergoing specific difficulties in growth and development. This program provides individual as well as group therapy and includes activities in art, sports and field trips of special interest to this age group.

An active school experience is part of this program. Individual lesson plans, administered by special education teachers and worked out with the children's own school district educators, keep

them from falling behind peers in their own community school. Because the student is allowed to move at his own pace in an individualized program, he develops confidence and self-discipline.

The Valley program regards adolescence as a psychological growth process—not a disease—so that time, skill and experience are critical ingredients of the treatment.

SUBSTANCE ABUSE PROGRAM—This treatment team is trained and experienced in the treatment of alcoholics and other drug-dependent persons.

A number of approaches are used in the treatment of alcoholism and/or drug abuse: individual and group therapy, substance abuse counseling, lectures, communication skills training, pastoral counseling, physical and recreational therapy, the 12 Steps of Alcoholics Anonymous, Antabuse therapy, and various forms of adjunctive therapy. Whenever possible, family members are urged to become involved in the patient's treatment through out-patient family and individual counseling.

REFERRAL—Valley maintains a 24-hour, seven-day-a-week emergency referral service. Referrals are accepted from psychiatrists and other physicians, the clergy, social workers, mental health professionals, social agencies, self and family.

Valley is fully accredited by the Joint Commission on the Accreditation of Hospitals.

Robert G. Aug, M.D., Medical Director
Susan McGuire, M.D., Medical Director,
Child and Adolescent Program

Carroll J. Carter, A.C.S.W., Director,
Substance Abuse Treatment Program

VALLEY PSYCHIATRIC HOSPITAL

P.O. BOX 21373 • SHALLOWFORD ROAD

CHATTANOOGA, TN 37421

(615) 894-4220

In Defense of Cesarean Section

MARVIN G. GREGORY, M.D.

Even a cursory examination of data in the field of malpractice litigation, awards, and settlements will reveal that obstetrics, obstetricians, birth-related injuries and surgical sterilization occupy a conspicuous position far out of proportion to the numerical rank of the specialty and to the relative complexity of the procedures involved (i.e., childbirth and tubal ligation).

The media, both professional and popular, is replete with discussion, analysis, debate, controversy, and criticism concerning this situation, and occasionally there appears an attempt to provide amelioration if not a solution to the problem.

The National Institute of Child Health and Human Development, in conjunction with the National Center for Health Care Technology and the Office for Medical Applications, NIH held a consensus conference in September 1980 and addressed the issue of cesarean childbirth. A summary of this conference is reported in the October issue of the *Journal of the Tennessee Medical Association* (74:734-740, 1981).

This conference is a truly commendable effort by enlightened, educated individuals to provide long overdue insight and understanding into a fundamental aspect of obstetrics. Regrettably, the conference summary is misleading, perhaps inadvertently, and consequently might prove to be more detrimental than beneficial.

"The rising cesarean birth rate is a matter of concern. The consensus statement reflects the judgment that this trend of rising cesarean birth rates may be stopped and perhaps reversed, while continuing to make improvements in maternal and fetal outcomes, the goal of clinical obstetrics today. The constructive steps that may be taken and goals for further research are recorded herein." The implication of the lead sentence is that cesarean section is malevolent. The unfamiliar might logically infer that a rising cesarean section rate is responsible for the dilemma in which obstetrics finds itself. The sentence: "The rising cesarean birth rate is a matter of concern," does not withstand logical analysis well. To whom is the matter of concern? If it is of concern, it should be of concern to obstetricians. It is self-evident that within the obstetrical specialty there is not unanimity that the rising rate of cesarean section is of concern. Were this the case, there would not be a rising rate, because obstetricians are largely responsible for the vast majority of cesarean sections.

The opening remarks tend to implicate cesarean section as a cause rather than a solution of soaring litigation problems of obstetrics and to the escalating malpractice premiums paid by obstetricians. The remainder of the summary, when critically read, does indeed dispell the false illusion created by the opening remarks.

Cesarean section, despite the legend that the procedure received its name from Gaius Julius Caesar in 100 B.C., apparently did not appear in dependable literature until the mid sixteenth century. Abdominal delivery became an acceptable procedure in 1882 only when Max Sanger, of Leipzig, Germany described suturing the uterine wall. Today, cesarean section is an established surgical procedure. Theoretically, the title of this paper is a malapropism. Cesarean section is good medicine and good medicine never needs defending. Rather than entitle my thoughts in defense of cesarean section, a more appropriate designation might be cesarean section in perspective.

I have previously expressed my opinion that cesarean section should be considered an alternative to vaginal delivery and should be presented as such to expectant parents very early in the prenatal course. It is simply absurd, to me, that a woman, by law, is given the option of terminating an unwanted pregnancy and yet our profession refuses her the right to elect the method by which she will terminate a wanted pregnancy. Cesarean section should be an elective procedure.

Ironically, the strongest support I have found to date is contained in the NIH Consensus Development Summary: "Parent education during pregnancy by health care providers should include information relating to the possibility of cesarean birth, an explanation of the technical procedures surrounding the cesarean birth and discussion of the choices available to parents."

Cesarean section should remain an alternative to vaginal delivery throughout pregnancy and throughout labor. Pregnancy, labor, and delivery are now considered by many, if not most, as an experience that a patient, her sexual partner and/or other family members should experience together. It appears unlikely that the situation will ever revert to the situation when pregnancy, labor, and delivery were looked upon as a condition for a woman to tolerate and endure—alone. Cesarean section carries a greater morbidity-mortality

rate for the mother than does vaginal delivery, albeit both rates have decreased markedly in the past years. This should be presented to the patient and her family but should not be used as an excuse to disallow her the freedom of choice in selecting her mode of delivery. Seldom, if ever, is the morbidity-mortality rate associated with organ donation mentioned or even considered when the process is discussed and certainly not when the recipient of an organ is a child or close relative of the donor. The transcendent objective of obstetrics, that each pregnancy culminate in a healthy mother and a healthy baby, has never been achieved, is not now being achieved, and seems unlikely to be achieved in the foreseeable future. I contend that when the physician can predict an unsatisfactory outcome or when circumstances indicate a greater than normal chance of an unfavorable outcome, complete honesty and an unreserved presentation of the facts should result in a decision between the patient (and her family) and her physician which should discourage subsequent litigation.

Again the NIH Summary supports this view:

"Physicians should support the patient's right to participate in the decision-making process concerning whether to have a cesarean by proper application of the doctrine of informed consent."

Throughout the NIH task force report the concept of involving the patient in the decision-making process is reiterated, and the concept that patient education relating to cesarean birth should continue throughout pregnancy, in order to avoid time-consuming explanations in an emergency situation, redounds. By no stretch of the imagination does the NIH Consensus Development Conference Summary denigrate cesarean section nor does it incriminate either cesarean section or a rising cesarean section rate in the litigious problems of obstetrics. Quite the contrary, it does just exactly the opposite. It is for this reason that the opening remarks appear so inopportune. Unfortunately, first impressions are often the most lasting, and often only the already informed will read beyond the first paragraph.

300-25th Ave. North
Nashville, TN 37203

Environmental Analysis . . .

(Continued from page 120)

procedures. The latter is an attempt to reduce the reimbursement levels for certain medical technologies that are deemed as too costly or as "inappropriate." Both relate to efforts to reduce the utilization of many technologies which are currently available.

In the third major area, technology assessment, the wide range of impacts related to the use of medical technologies will continue to be evaluated. Such efforts, handled mainly at the national level, will seek to influence diffusion of medical technologies beforehand, by balancing the risks against the benefits of widespread technological diffusion and making appropriate recommendations.

As the basic provider of these technological services, physicians will continue to be "caught in the middle." The public will continue to demand more of the latest technologies and government and third parties will try to restrict their usage.

Implications

All of these areas present major challenges which the medical profession will be expected to come to grips with in the coming years. Physicians are going to

have to rely on their professional organizations to take a leadership role on all of these issues. In particular, organized medicine will need to develop policies on the use of technologies and also be in the forefront of efforts to provide objective evaluation of the efficacy of current technology and of new developments as they occur.

REFERENCES

1. *Economic Report of the President*, U.S. Government Printing Office, Jan. 1981.
2. *Economic Report of the President*, U.S. Government Printing Office, Jan. 1980.
3. *Business Outlook 1981*, The Conference Board, Informational Bulletin, no 82, Nov 20, 1980, p 4.
4. The economy in the 1980s. *Fortune*, Oct 8, 1979.
5. Guzzardi W: Demography's good news for the eighties. *Fortune*, Nov 5, 1979, p 92.
6. *Business Week*, Feb 20, 1978.
7. Weidenbaum ML: The impacts of government regulation, for the Study of American Business. St. Louis, Washington University, July, 1978.
8. The American Enterprise Institute, *Public Opinion*, Jan/Feb, 1978, pp 6-13.
9. *Medical Economics*, Oct 19, 1979.
10. Department of Health and Human Services: *Report of the Graduate Medical Education National Advisory Committee (GMENAC)*, Sept, 1980, volume 1, p 16.
11. *Medical Economics*, Dec 6, 1980.
12. Ellwood PM, Ellwein LK: Physician glut will force hospitals to look outward. *Hospitals*, Jan 16, 1981.

Political Hardball at the Aging Conference

LEWIS B. LEFKOWITZ, JR., M.D.

The White House Conference on Aging, held in Washington, D.C. in early December, received a good deal of attention in the press and seemed, by those reports, to have been dominated by the Reagan administration. Having been at the conference, I should like to verify those impressions and to indicate why I think it was done. I will also describe some of the techniques used to reduce the effectiveness of the conference.

Most Americans, as they grow older, retire from the work force and, in a way, drop out of the "market economy" that is the mainstream of our society. Corollaries derived from this general statement are: (1) once unemployed, older persons are immune to economic retribution for political positions, as witnessed by the unexpected effectiveness of the lobbying carried on by groups representing them, which are increasing rapidly in numbers; (2) once their employees retire, former employers no longer have an economic interest in promoting their health and welfare, as they did when the productivity of their businesses could be enhanced; (3) because older persons tend to have fixed, and relatively lower, incomes, the private, profit-making sector of our economy does not depend heavily on the increasing numbers of older persons for a proportionately large segment of their market; and (4) relatively larger proportions of older persons' incomes are derived from public sources.

Because of all these factors, and perhaps several others, it was clear that an unimpeded, well-coordinated Conference on Aging would be politically powerful, and make most of its legitimate demands on public rather than private sources of aid.

I believe our administration chose to intervene in the processes of the conference in order to reduce or neutralize its effectiveness. Many techniques, some subtle, and some blunt and obvious, were employed. There were hundreds of late-appointed delegates and committee chairmen, many of them unfamiliar with the previous years' work which had led up to the conference. That work had been done effectively and thoroughly by task forces of experts and state commissions and conferences comprised of older citizens and their advocates. These groups had developed agendas

for this conference. The new delegates were direct appointees by the White House, totally committed to the administration's stated positions. The committee for which I was an invited consultant was told by the staff that there was no budget allocation to permit delegates to have copies of agendas, rules, supporting data, or passed and proposed resolutions, although a few of these got reproduced. Copying machines were out of order or just not available. There was no circulated list of all delegates and alternates and their locations, and one could not attend any official committee meeting other than the one to which he was arbitrarily assigned. Rules were made *not* by the delegates but by the administration, and were waived or changed at the convenience of the staff and chairmen, while delegates had difficulty circumventing them.

Anger and frustration over these and many more impediments could not help but interfere with the orderly, objective, and thoughtful approaches needed to address the problems of aging and to assure the credibility of the conference. What might have appeared to be unruly behavior or impatience on the part of the delegates was instead the response of people given a task and then told that the tools to do it would not be available, or if available, would be taken away.

When this response by the majority of the delegates became news, the administration relaxed its pressure, but the damage had been done and the resolutions that emerged at the end of the conference were uncoordinated and in some cases conflicting. The conflicting resolutions came mainly out of two or more separate committees whose membership and chairs were augmented by "administration" delegates to differing degrees.

Through the tactics of the administration in conducting this conference, older Americans and their advocates have literally been diverted from an opportunity to take the initiative in the solution of the problems we now are experiencing and which seem destined to get worse.

Department of Preventive Medicine
Vanderbilt University Medical Center
Nashville, TN 37232

Cyclapen®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*) and *H. influenzae*
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg q.i.d. body weight > 20 kg (44 lbs) 250 mg q.i.d.
Branchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.

†depending on severity

How Supplied Tablets 250 mg and 500 mg in bottles of 100. Oral Suspension 125 mg and 250 mg per 5 ml in bottles to make 100 ml and 200 ml of Suspension.

Wyeth Laboratories
Philadelphia, Pa 19101

NME...

the "help you establish a successful practice" experts.

Our goal at National Medical Enterprises is to help you establish a comfortable and successful Primary Care practice.

Where you want it.

How you want it.

It's a goal we achieve by offering you a choice of over 60 well equipped acute care hospitals coast to coast, by offering you selected financial assistance, and by offering you management consulting when you begin your practice.

So whether you're interested in solo, partnership or a group practice, you should contact NME.

We're the experts!

For further information, contact:

Raymond C. Pruitt, Director, Physician Relations
National Medical Enterprises

11620 Wilshire Blvd., Los Angeles, California 90025.

Toll-Free 800-421-7470

or collect (213) 479-5526.

**NATIONAL MEDICAL
ENTERPRISES, INC.**



"The Total Health Care Company."

An Equal Opportunity Employer M/F

Hyperkalemia in Diabetes Mellitus

Alan L. Graber, M.D. (endocrinologist, St. Thomas Hospital): The patient is a 64-year-old woman who was hospitalized for femoral arteriography because of a three-month history of claudication in the right leg. She had non-insulin-dependent diabetes for 20 years and was taking tolbutamide, 1 gm daily. She followed no diet, used no potassium supplements nor salt substitutes, and was taking no other medications. She did not smoke.

Physical examination revealed an overweight woman in no acute distress with blood pressure of 150/80 mm Hg. Optic fundi and heart and lungs were normal. There were no abdominal bruits and no orthostatic hypotension. No pulses were felt below the femorals bilaterally.

Laboratory data showed normal urinalysis, hematocrit, WBC, differential, and platelets. The serum potassium was 6.5 mEq/liter, the sodium was 132 mEq/liter, the chloride was 96 mEq/liter, and the HCO₃ was 25 mmol/liter. The BUN was 20 mg/dl, the serum creatinine 2.0 mg/dl, and the creatinine clearance was 56 cc/min. The average fasting plasma glucose was 240 mg/dl, and a glycosylated hemoglobin level was 11.2%. A cortrosyn stimulation test was performed. The plasma cortisol rose from 14 µg/dl to 28, excluding the possibility of adrenal insufficiency. A lasix-stimulated upright plasma renin level was 0.3 (subnormal) and a simultaneous aldosterone level was 4.8 ng/dl (also subnormal).

Ruth Miller, M.D. (endocrinology fellow, St. Thomas Hospital): This patient was felt to have the syndrome of hyporeninemic hypoaldosteronism, but there are numerous causes of hyperkalemia which should be excluded before this diagnosis is made (Table 1). Very high platelet and leukocyte counts, which occur in hematologic disorders, should be excluded, along with

hemolysis of the red cells. This patient was not receiving potassium supplements or salt substitutes, which are frequently used in patients on low sodium diets. It should be noted that high

TABLE 1
CAUSES OF HYPERKALEMIA

-
- | | |
|------|--|
| I. | Factitious (Pseudohyperkalemia) |
| | A. Thrombocytosis |
| | B. Leukocytosis |
| | C. Poor venipuncture technique |
| | D. In vitro hemolysis |
| II. | Increased Intake |
| | A. Iatrogenic |
| | 1. K ⁺ supplements |
| | 2. Low Na ⁺ diet (salt substitutes) |
| | 3. High dose penicillin Rx |
| | 4. Multiple transfusions of stored blood |
| | B. Dietary |
| III. | Inadequate Excretion |
| | A. Renal failure |
| | 1. Acute renal failure (ATN) |
| | 2. Severe chronic renal failure |
| | B. Diuretics which inhibit potassium secretion (spironolactone and triamterene) |
| | C. Impaired Renin-Aldosterone System |
| | 1. Adrenal |
| | a. Addison's disease |
| | b. Congenital adrenal hyperplasia (21-hydroxylase deficiency) |
| | c. Drugs—heparin, metyrapone, op DDD |
| | 2. ACTH deficiency |
| | 3. Hypoaldosteronism (with hyperreninemia) |
| | a. 18 hydroxysteroid dehydrogenase deficiency |
| | b. Angiotensin deficiency (captopril—inhibits angiotensin-converting-enzyme) |
| | c. Heparin Rx—rare-blocks synthesis of aldosterone |
| | 4. Hyporeninemic Hypoaldosteronism |
| | a. Chronic suppression of renin-aldosterone system by volume overexpansion |
| | 1. Postoperative aldosteronoma removed |
| | 2. Chronic baking soda overuse |
| | b. Autonomic insufficiency—frequent in diabetes mellitus (orthostatic hypotension) |
| | c. Prostaglandin deficiency |
| | 1. Unknown etiology |
| | 2. Indomethacin or Ibuprofen Rx |
| | d. Unknown etiology |
| | 1. "Hyporeninemic hypoaldosteronism" (type IV RTA) |
| | 5. Renin synthetic defect |
| | D. Pseudo-hypoaldosteronism (conditions of renal tubular nonresponsiveness to aldosterone) |
| | 1. Nonresponsiveness of renal tubule to aldosterone |
| | 2. Renal tubular damage |
| | "Salt losing nephropathies" |
-

The Diabetes Clinical Care Conference at St. Thomas Hospital, Nashville, Tenn., a collaborative educational program of the St. Thomas Department of Hospital Education and the Vanderbilt Diabetes Research and Training Center, is edited by Alan L. Graber, M.D.

doses of intravenous penicillin contribute considerable potassium.

Linda Beasley, R.D. (dietician, St. Thomas Hospital): All the salt substitutes in clinical use contain potassium and occasionally cause hyperkalemia.

Dr. Miller: Inadequate excretion of potassium occurs in acute renal failure or severe chronic renal failure, and can be associated with diuretics which inhibit potassium excretion, such as spironolactone and triamterene. Impairment of the renin-aldosterone system can have several causes. Addison's disease was excluded by a normal cortrosyn test in this patient. Congenital adrenal enzymatic deficiencies would be unusual in the adult. Heparin sometimes causes hyperkalemia due to a disturbance in the synthesis of aldosterone.¹

Dr. Graber: In a patient on anticoagulants, I would think of hemorrhage into the adrenals rather than a subtle defect of aldosterone synthesis.

Ann Price, M.D. (medical chief resident, St. Thomas Hospital): We have seen several patients with hyperkalemia who are receiving heparin therapy, sometimes subcutaneously, so it is probably not a rare syndrome.

Dr. Miller: The natural stimulus to aldosterone secretion is by way of the renal production of the enzyme renin, which catalyzes the conversion of angiotensin precursor to angiotensin. The angiotensin converting enzyme (ACE) stimulates the conversion of angiotensin I to angiotensin II. ACE is inhibited by the new antihypertensive drug, captopril, and angiotensin deficiency due to this drug has been reported. The renin-angiotensin-aldosterone system can be chronically suppressed by volume overexpansion, such as occurs in massive overuse of salt or baking soda, or after removal of an aldosterone secreting tumor. Renin production is stimulated by the sympathetic nervous system, and renin may be deficient in the syndrome of autonomic insufficiency, which is frequent in diabetes mellitus. This syndrome is usually associated with orthostatic hypotension, which was not present in this patient.

Prostaglandin deficiency can theoretically result in deficient renin production, and it should be remembered that prostaglandin inhibitors, such as indomethacin and ibuprofen, can produce this problem.

John McCray, M.D. (Vanderbilt Diabetes Research and Training Center): Because of this

problem, patients with hyporeninemic hypoaldosteronism should not be given prostaglandin synthesis inhibitors, for that would worsen the problem. Prostaglandin excess is probably the cause of Bartter's syndrome, in which renin is overproduced and hypokalemia results, and this condition is treated with prostaglandin inhibitors.

Dr. Miller: Unusual renal conditions in which the renal tubules do not respond normally to aldosterone can result in hyperkalemia. In addition, a shift of potassium from the tissues, such as would occur in muscle crush injuries, hemolysis, internal bleeding, or other tissue damage, and severe metabolic acidosis result in hyperkalemia. Finally, diabetic patients have hyperkalemia when challenged with a large glucose load, for unknown reasons.²

If all of the above causes are excluded, the diagnosis of hyporeninemic hypoaldosteronism should be strongly considered.^{3,4} Its cause is unknown, though prostaglandin deficiency as an etiology has not yet been adequately investigated. It is a common clinical problem, usually occurring in elderly patients. There is often mild renal insufficiency, usually with a component of renal interstitial disease, and sometimes mild compensated metabolic acidosis. It is necessary to establish evidence of normal cortisol reserve to exclude adrenal insufficiency. Almost half of the patients who have this problem are associated with diabetes for reasons that are not understood. Criteria for the diagnosis include lack of other obvious cause of hyperkalemia, subnormal plasma renin and aldosterone levels, subnormal 24-hour basal urinary aldosterone, and correction of the problem with 9- α -fluorohydrocortisone (Florinef) in maintenance doses of 0.1 mg daily.

Dr. Graber: The patient received Florinef in this dosage with correction of hyperkalemia and underwent lower extremity vascular reconstruction without difficulty. It should be emphasized that the small dose of Florinef used for this condition would probably not be enough to correct orthostatic hypotension if it was also present.

REFERENCES

1. Leehey D, Gantt C, Lim V: Heparin-induced hypoaldosteronism. Report of a case. *JAMA* 13:2189-2190, 1981.
2. Nicolis GL, Kahn T, Sanchez A, et al: Glucose-induced hyperkalemia in diabetic subjects. *Arch Int Med* 141:49-53, 1981.
3. Tan SY, Burton M: Hyporeninemic hypoaldosteronism: An overlooked cause of hyperkalemia. *Arch Int Med* 141:30-33, 1981.
4. Schambelan M, Sebastian A: Hyporeninemic hypoaldosteronism. *Adv Int Med* 24:385-405, 1979.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 67-year-old executive entered St. Thomas Hospital for evaluation of cough and malaise. He complained of poor appetite, vague abdominal discomfort and occasional night sweats over the previous two weeks. His blood pressure was 104/78 mm Hg, pulse 80/min, and he was afebrile. His chest was clear to auscultation, but on cardiac examination a low-pitched sound was heard after the second heart sound and a three-component friction rub was audible. The jugular venous pulses were visible at the mid neck at 20° elevation with prominent A and V waves and rapid X and Y descents. The amplitude of the A and V waves increased slightly with inspiration. Liver and spleen were not palpable. There was mild pitting edema of the feet and ankles. An electrocardiogram was obtained (Fig. 1).

The electrocardiogram shows sinus rhythm at a rate of 73/min. There is very slight sinus arrhythmia, and the P-R interval is normal at 0.18 seconds.

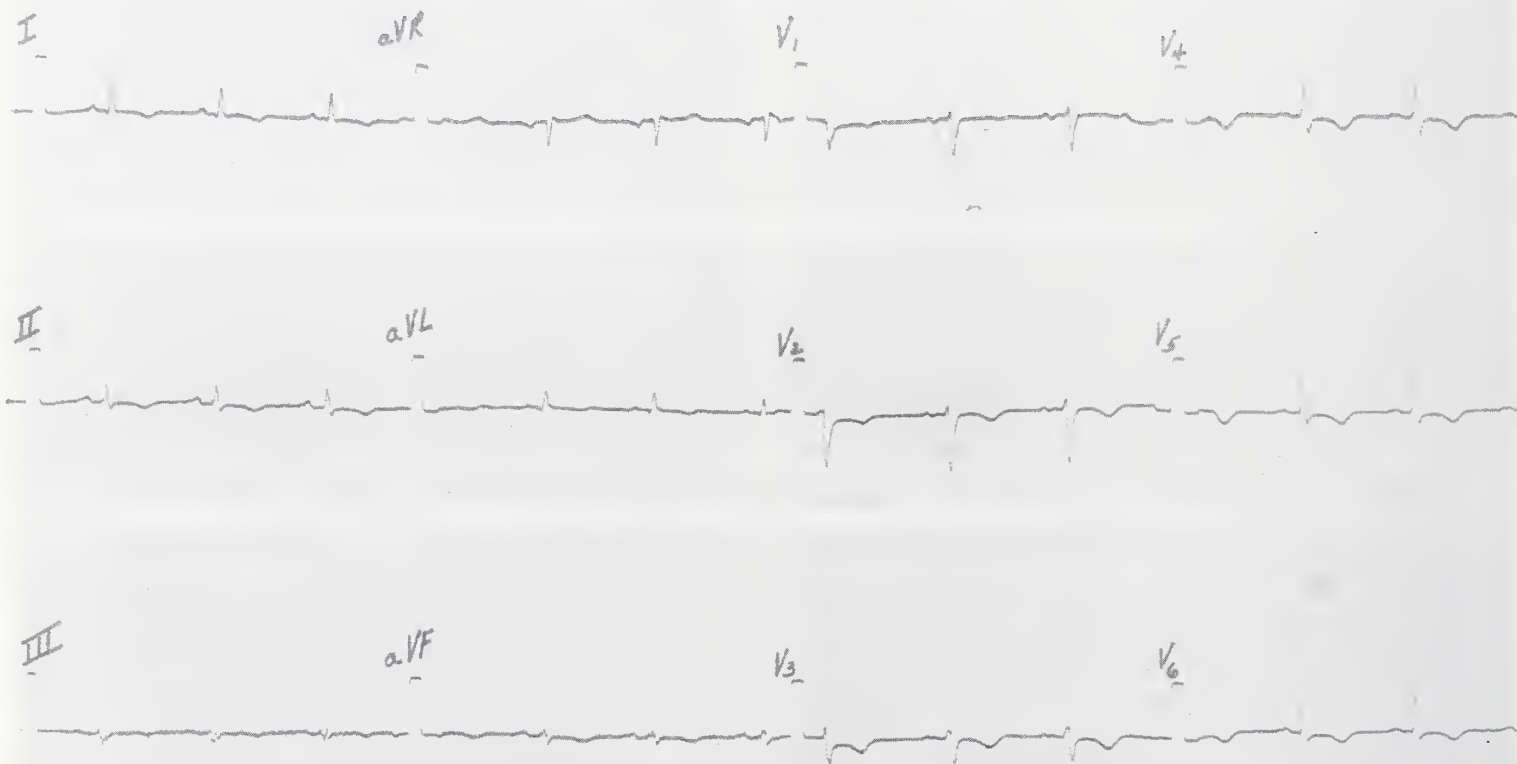


Figure 1

Discussion

The QRS amplitude shows a borderline decrease although the QRS morphology is normal in all leads. Low voltage is commonly defined as voltage of less than 6 mm in the standard limb leads and less than 12 mm in the precordial leads. Maximal voltage in the limb leads occurs in standard lead I and is 5 mm. Maximal voltage in the precordial leads is 11 mm (V_2). Low voltage may be seen in a wide variety of conditions such as emphysema, myxedema, anasarca, starvation, pleural effusion, or pericarditis. Low voltages commonly seen in chronic pericarditis may be related to myocardial atrophy, a short circuiting effect of pericardial fluid,¹ an insulating effect of fibrin and thickened pericardium,² or decreased intraventricular volume (the "Brody effect").³

The P wave voltages are normal but the P waves are broad and notched in lead II, aVL and V_1 through V_6 . It is not unusual to see an intraatrial conduction abnormality in pericarditis, and notched P waves resembling those seen in mitral valve disease have been described.⁴ Atrial fibrillation may occur. The P voltages are characteristically well preserved even though the QRS voltages may be decreased.⁵ The preservation of P voltages is probably due to the lack of pericardial reflection over the posterior atrium.

A striking finding on this tracing is the abnormal rightward and superior T vector, producing prominent T inversion in all leads except aVR and V_1 . Repolarization changes on the electrocardiogram must always be regarded as nonspecific since any given ST segment or T wave abnormality may be associated with a wide variety of clinical problems.⁶ Widespread T inversion of the type seen in this tracing is nonetheless characteristically seen with chronic pericarditis. Although it was previously thought that QTc prolongation accompanied this T wave abnormality,⁷ a review of electrocardiographic changes in 31 patients showed no QTc interval lengthening.⁵ This may help differentiate patients with pericarditis from those with myocardial ischemia, in whom QTc is more commonly prolonged.

Pericarditis during the more acute stages will often result in ST segment elevation resembling an "epicardial injury pattern" commonly seen in leads II, III, aVF and V_3 through V_6 . The T waves may occasionally be prominent. As the process becomes more chronic the ST segment abnormality is resolved, and T inversion of the type seen above may be the only residual abnormality.

The electrocardiographic changes in pericarditis differ from those in myocardial infarction or ischemia in their much slower evolution. The repolarization changes of pericarditis are also more widespread and tend to involve many leads. Pericarditis does not cause the appearance of Q waves. As noted above, the QTc interval has less tendency to be prolonged in pericarditis than in myocardial ischemia.

A pericardial "window" procedure carried out from the subxyphoid approach in this patient showed an irregularly thickened pericardium, its thickness varying from 0.5 to 1 cm. There was nonspecific chronic inflammation, in which there were no granulomata, and no organisms were identifiable on routine, acid fast, or fungal stains. The pericardial fluid was bloody and many dense fibrous adhesions were present. His symptoms improved following surgery and he was discharged on no specific therapy.

CONCLUSION: (1) Intraatrial conduction defect, (2) Borderline low voltage, (3) Nonspecific widespread T wave inversion. The above findings are compatible with chronic pericarditis of unknown etiology.

REFERENCES

1. Fowler NO: Electrocardiogram in pericarditis. *Cardiovascular Clinics*. Philadelphia, F.A. Davis Co, vol 5, no 3, 1973, p 256.
2. Rudy Y, Plonsey R, Liebman J: The effects of inhomogeneities and geometry on the electrocardiogram. *Circulation* 56:III-17, 1977.
3. Brody DA: A theoretical analysis of intracavitary blood mass influence on the heart-lead relationship. *Circ Res* 4:731, 1956.
4. Wood P: Chronic constrictive pericarditis. *Am J Cardiol* 7:48, 1961.
5. Surawitz B, Lasserter KC: Electrocardiogram in pericarditis. *Am J Cardiol* 26:471, 1970.
6. Abildskov JA: Non-specificity of ST-T changes. *Cardiovascular Clinics*. Philadelphia, F.A. Davis Co, vol 6, no 1, 1974, p 170.
7. Friedman HH: *Diagnostic Electrocardiography*. New York, McGraw-Hill, 1971, p 263.

CAT Scan of the Month

STEPHEN L. GAMMILL, M.D.; MYRON LEWIS, M.D.; RICHARD CHEEK, M.D.;
WILLIAM RUSSO, M.D.; WILLIAM LANKFORD, M.D.; and ALLEN TONKIN, M.D.

A 68-year-old woman presented with chills, fever and abdominal pain located in the epigastrium and radiating to her back. She had lost 10 lb over the month prior to admission and complained of loss of appetite. Physical examination disclosed no abdominal masses but the abdomen was generally tender. Her temperature spiked to 102 F daily during hospitalization. Laboratory work showed total serum bilirubin 0.6 mg/dl, alkaline phosphatase 571 units/liter (normal 30-100), amylase 20 units/dl, SGOT 23 units/liter, SGPT 37 units/liter (normal 0-35), glucose 332 mg/dl. CAT scan of the abdomen is represented in Figures 1 and 2. Please examine and see if you can ascertain the diagnosis (diagnoses). Both figures represent two cuts through the abdomen cephalad to caudad.

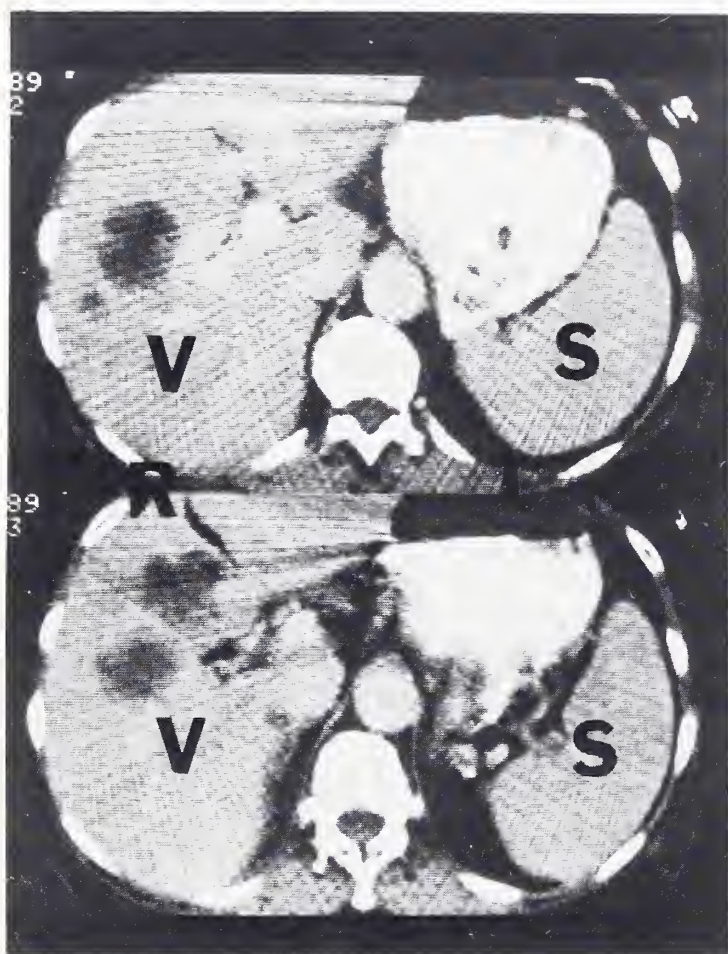


Figure 1. Two cuts through the abdomen. (R = Right, L = Left, V = Liver, S = Spleen.)

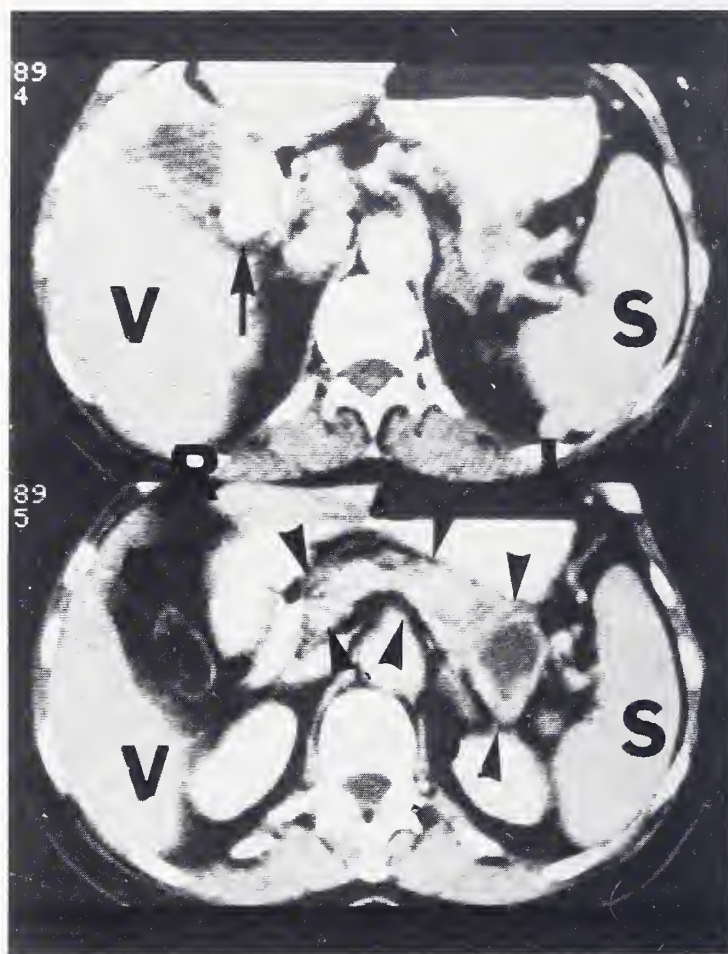


Figure 2. Two cuts through the abdomen caudal to the ones in Figure 1. Arrow points to gallbladder, arrowheads outline pancreas.

Discussion

Note in both cuts of Figure 1 that the liver contains multiple radiolucent filling defects suggesting metastases. In the upper cut of Figure 2, the arrow points to the gallbladder which con-

tains stones in the fundus. The stones do not project well, and actually CAT scanning is not an ideal diagnostic modality to detect gallstones. In the lower cut of Figure 2, the pancreas is outlined with the arrowheads. It is enlarged and lobular and contains a cystic mass in the tail.

From the Departments of Radiology, Medicine and Surgery, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146.

(Continued on page 134)

Training for EMT/Paramedics in Perinatal Care and Transport

JACK P. POWELL, M.D.

The Division of Emergency Medical Services for the State of Tennessee has participated with the State Perinatal Advisory Committee and the Subcommittee on Perinatal Transportation in developing a structured training module for emergency medical technicians/paramedics in perinatal stabilization and transport. This module will be offered to personnel in those counties that have been identified as transporting significant numbers of high-risk perinatal patients to the four Regional Perinatal Centers.

In 1974, the Tennessee Legislature passed legislation establishing the Tennessee High-Risk Newborn Program and the Newborn Advisory Committee, which in turn formed the Subcommittee on Regionalization, Care Levels, Staffing, and Facilities. Four perinatal regions were delineated by this group: West, Middle, East, and Southeast. In 1976, funds to implement the High-Risk Newborn Program were appropriated, and in 1977 the original legislation was expanded to include high-risk obstetrics. Additional funds were provided and the committee was expanded to become the State Perinatal Advisory Committee.

After the High-Risk Newborn Program began, it became possible to identify those areas of the state from which the largest numbers of newborn referrals to the Regional Centers were coming. It became evident that one gap in the program was the lack of trained personnel in some regions to stabilize and transport these high-risk infants. Outreach and inservice programs on sta-

bilization of newborns for transport and care en route were developed and conducted by the Regional Centers for nurses and physicians. In addition, one center began to teach EMT/paramedics from their perinatal region.

The Subcommittee on Perinatal Transportation felt that to assist in filling the gap a training program about high-risk newborn and maternal transport should be formulated and offered to EMT/paramedics in those high-density referral areas. This would establish a nucleus of paramedical professionals skilled in perinatal transport. Therefore, after the subcommittee had completed the development of the *Tennessee Perinatal Care System Guidelines for Perinatal Transportation*, it undertook to develop a manual, *Educational Objectives for Emergency Medical Technicians/Paramedics*. In June 1981, this document about perinatal stabilization and transport was distributed to the Regional Perinatal Centers and to Emergency Medical Services.

The training module consists of two components: one for newborn and the other for obstetrics. The subcommittee believes that a 30-hour course with approximately half devoted to each component will be adequate to cover the educational material. Such a course should be aimed only at improving the supportive role of EMT/paramedic staff; it does not qualify the EMT/paramedic to undertake a high-risk transport unless a qualified physician and/or nurse is present.

Goals of the Newborn Component are (1) to train the EMT/paramedic to provide basic short-term care for the neonate who is the product of a nonhospital emergency delivery, both at the site of such delivery and during transport to the nearest medical facility, and (2) to assist nurses,

From the Tennessee Department of Public Health, Nashville. Dr. Powell is medical director of the Division of Emergency Medical Services of TDPH.

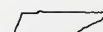
physicians, and respiratory therapists in the care of high-risk neonates during transportation between hospitals. Objectives of this component are training in physical assessment, risk factors, care of the mature infant with APGAR score of 7-10, care of the high-risk neonate, temperature management, and transport safety.

Goals of the Obstetric Component are (1) to train the EMT/paramedic to provide safe transportation and basic short-term emergency care for the obstetric patient who may deliver in a non-hospital setting, and (2) to be able to serve as an informed assistant for nurses and physicians involved in transporting the obstetric patient during an emergency situation. Objectives of this component are an elementary knowledge of the terminology associated with reproduction and reproductive anatomy, basic knowledge of labor and delivery, immediate care of the mother

and infant, postpartum bleeding, and other obstetric emergencies, as well as care of the obstetric trauma patient and patient safety before and during transport.

The training module is available for future presentation to EMT/paramedics through the Regional Perinatal Centers: E. H. Crump Women's Hospital and Perinatal Center, Memphis; Vanderbilt Medical Center, Nashville; University of Tennessee Memorial Hospital, Knoxville; T. C. Thompson Children's Hospital/Erlanger Medical Center, Chattanooga.

Additional information on the program may be obtained by contacting Tennessee Department of Public Health, Emergency Medical Services (Tel. 615-741-7221) or Maternal and Child Health (Tel. 615-741-7335), R. S. Gass State Office Building, Ben Allen Road, Nashville, TN 37216.



CAT Scan of the Month . . .

(Continued from page 132)

This was interpreted as either a carcinoma of the tail and body of the pancreas that had become necrotic, a carcinoma of the pancreas with pseudocyst formation, cystadenocarcinoma of the pancreas, or pancreatitis with pseudocyst formation. This latter diagnosis was considered unlikely because of the metastatic deposits in the liver.

Exploratory celiotomy was thought to have been indicated to find the cause of the chills and fever and to alleviate it if possible. At operation, a hard mass was felt in the body of the pancreas along with multiple nodules in the liver. Biopsy of a liver nodule showed metastatic carcinoma of the pancreas. Multiple enlarged lymph nodes were noted in the hepatoduodenal ligament. The gallstones were removed and a cholecystojejunostomy and jejunojejunostomy performed as palliative measures. Because of the hazards of

biopsy of the pancreas, the mass was not biopsied.

The differential diagnosis of the radiolucent mass in the tail of the pancreas is either pseudocyst or necrotic carcinoma. Because of the chills and fever, a pseudocyst seems likely, although either necrotic carcinoma or gallstones could produce this clinical picture.

The CAT scan was most useful in this case, as the pancreas could not be examined with ultrasonography because excessive bowel gas overlying it blocked sound transmission, thus obscuring it. The liver metastases were also not detected on ultrasonography, but the gallstones were.

FINAL DIAGNOSES: Carcinoma of the pancreas with metastases to the liver; necrotic carcinoma or pseudocyst of the tail of the pancreas; gallstones.





ALLEN S. EDMONSON

Community Effort

The Pentagon has come up with a military medical plan that makes more sense than any to which we have become accustomed from ordinary bureaucrats. The Civilian-Military Contingency Hospital System is being organized to utilize portions of many civilian hospitals to treat military casualties from a rapidly beginning conflict or war. Hospitals near military bases and accessible air transportation are being asked to allocate 50 beds or more, which could be made available on a two- or three-day notice and be managed by staff physicians and hospital personnel.

The alternative to the standby system is a massive 300,000- to 400,000-bed building, equipping, and staffing program for military hospitals which we don't need in peacetime. We obviously do need a system to manage just such an emergency, however.

The federal government promises to pay charges, not costs, and will move patients to permanent military facilities as soon as reasonable.

This program, in my view, is both fiscally responsible and medically reasonable and should be supported by the entire profession. After all, these casualties will be "our" sons and daughters.

Allen S. Edmonson M.D.

Journal of the tennessee medical association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson

WINSTON P. CAINE, JR., M.D., Chattanooga

GEORGE W. SHANNON, M.D., Jackson

DILLARD M. SHOLES, JR., M.D., Johnson City

FRANCIS W. GLUCK, M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

FEBRUARY, 1982

editorials

Win, Lose, or Draw

Once upon a time, when the world was just waking up, it was abloom with lush plants and awash with warm, soft waters, and there were neither wars nor rumors of wars. Of course, there were no people, either; neither were there any other critters to eat each other up and shed unsuspecting blood. There were only plants—im-

mobile and lovely (and maybe some also not so lovely). Then one day this young man was just standing around minding his own business, offering up a sacrifice to his God, when his brother snuck up behind him and opened up his head with something or other—we aren't told what; ever since then each man's private world and the world in general have been teetering on the brink. For a long time it was possible to keep the teetering local, first confining it to backyards, later to some town or other, then to one country. Not any more. Irving Berlin's popular World War I song "Over There" would now be "Over There and Here."

This morning a small, rather inane headline appeared in the morning paper announcing that 1981 was a year of violence. Sure enough, it was. For starters, there were wars in Central America and the Middle East (when were there not?); the assassination of Anwar Sadat in Egypt and the attempted assassination of President Reagan and Pope John Paul (shades of the Kennedys and Archduke Ferdinand); and uprisings for freedom in Poland (remember Hungary and Czechoslovakia—or Gallipoli and the Maccabees—or the Boston Tea Party, for that matter?).

When I was growing up in Chattanooga there were knifings and razor fights every Saturday night on Ninth Street and elsewhere, and when I was a senior medical student we could always liven up a dull Saturday evening practicing our hem-stitching at Nashville General. Then there were the Chicago gang wars of the Thirties and the New York gang wars of the Fifties, and a lot of others not so famous and more or less continual. And don't let's forget the Brotherhood and its comings and goings. The victims of all those sallies were (and are) just as dead as the victims of an early Sunday morning bomb run on Pearl Harbor, and the violence just as violent. Only the extent and the repercussions are different.

In a sense it is the height of folly to be writing an editorial today, December 27, about what happened in 1981, and I do it only because our deadline is tomorrow. That deadline is for the February issue, and even by then 1981 will be old news. The newspaper, though, could have waited another week and gotten those last five days in.

Perhaps they were remembering, as I am, how in a twinkling on December 7, 1941 the way of life of the whole world was suddenly and permanently changed, and perhaps they were think-

ing, as I am, that a similar event today could spell the end of both themselves and their newspaper. It *probably* won't happen, but—a bird in the hand, so to speak.

A lot can happen in those five remaining days. There are all sorts of possibilities. As long as there are people, though, you can bet those days, like every other, will be filled with violence. The question is only as to its magnitude. Too, there is always the possibility that the Lord might return, but then again He might not, and, as Pogo once said, we have to live each day as it comes, win, lose, or draw. One only hopes to live it one way or another, and the pragmatic assumption is that one will. But then, one never knows, does one?

J.B.T.

On Being Our Neighbor's Neighbor

With one tenth of this present decade behind him, someone—I have mercifully forgotten who—has written that the '80s will be the decade of the poor. I am never sure what motivates individuals to assign names to years or decades, but I am always suspicious that in some way it is self-serving. Some years ago a wag opined that there are more people living off cancer than are dying of it. While that may or may not be true of cancer, the federal bureaucracy being what it is I am relatively certain that statement could be applied with at least equal accuracy to poverty.

There is nothing funny about either cancer or poverty, but both situations are relative and their causes varied and complex. Given present circumstances, both are likely to get worse before they get better. The world is now small, and it is folly to think of either public health or poverty in anything but global terms. It has been estimated that at this moment 70 million people are in imminent danger of starvation, 400 million are chronically malnourished, and one billion—one fourth of our cohabitants of this planet—never get enough to eat.

Barring nuclear war or other worldwide disasters, by the year 2000 Mexico City is expected to be the largest city in the world, with 32 million people, the majority of them living in communities made of tin cans and cardboard boxes, de-

void of any life support systems and sanitation, part of a world with 6.3 billion people in it. There will be in that world of tomorrow twice as many hungry as there are today. It is, whether or not we wish it so, our problem. By "our" I mean yours and mine.

A new Public Broadcasting System feature entitled "The Brand New Illustrated Journal of the Arts," just arrived on the scene, was well done and was indeed interesting and informative as far as the arts were concerned. But everybody these days seems to think their program, book, play, or whatnot has to have a message. This one had several. There was, as might have been expected, reaction to federal budget cuts for the National Endowment for the Arts. I happen to share their despair, but I am also sympathetic towards the first administration in decades to try to reduce federal spending, and friends, that ain't easy. There were, though, some cheap shots in other directions by individuals who I doubt have any understanding of what the administration is trying to accomplish.

In 1932 this country was in the depths of a depression that was worldwide but which for political reasons was blamed on the previous administration. Socialist reforms, patterned as much as possible on the Marxist doctrine, were being instituted everywhere. Their philosophy was basically "to each according to his need, and from each according to his ability to pay." It simply paraphrased the words of Jesus, who said that from him to whom much is given, much is also required. For political purposes, though, need was, and still is, equated with desires, and so this was stretched to mean to each according to his wishes, or, specifically, "two chickens in every pot and two cars in every garage." It produced a generation of deadbeats, and we had—and still have—the poor and the "poor." It also produced a vast army of welfare workers; many of them being civil servants, they are firmly entrenched.

The most damaging philosophy, federally fomented and propagated, was that largesse was obtainable only from Washington. This philosophy gained momentum during World War II with the imposition of wartime controls.

Contrary to what has been implied by the "loyal opposition," the Reagan administration has never had any intention of abandoning the needy. What it has strongly suggested is that as state and local governments are in a far better position than the federal government to deter-

mine local needs and find the truly needy, the poor could be helped more efficiently, effectively, and economically on the local level, just as they were before Big Brother took over a half-century ago.

What the Reagan administration has done is to put the ball in our court, where it belongs. We can no longer look to Washington to do for us what we should all along have been doing for ourselves. It may mean that local taxes will have to increase more than federal taxes will decrease until the fat in the form of Washington hangers-on can be trimmed.

Two of the three of my great-grandfathers who were alive at the time fought in the Confederate Army (the other took his young family and left Savannah early, sitting it out in Switzerland), along with countless great and great-great uncles and cousins, for the right of self-determination for the states. Many suffered and several of them died for it. It is a good old Tennessee doctrine. We have abandoned it, to our spiritual, fiscal, and cultural poverty. We need to get back to taking care of our own, and if we do, we will have enough left over to do our share in caring for those other millions elsewhere. It is better if we are motivated by neighborliness, but in any case, we need to do it before our poverty-stricken neighbors decide to stop being our neighbors and aid our enemies in taking everything we have.

J. B. T.

The Old Folks at Home: Reflections

A Stephen Foster all time favorite is "Old Folks at Home," better known today by its first line, "Way down upon the Swanee River." Perhaps this preference is Freudian, reflecting a growing unrest about—and perhaps a distaste of modern man for—the old folks. It is ironic that we continue to aspire to immortality—for ourselves, and therefore of necessity for others—and at the same time grow weary of the problems the aged increasingly make for us. They are a drain upon our resources; we generally think they are noncompetitive citizens, contributing little to the society on which they make increasing demands, or else that if they do not dry up and vegetate, they compete with the youngsters for

scarce jobs. Either way they are unwelcome, and few of us seem to have the foresight to recognize that we will all too soon swell their ranks—we hope.

Several years ago—I'm not sure exactly when—a national conference on aging was planned by a sympathetic federal administration. It was held recently under the aegis of a new, cost-conscious, and therefore largely unfriendly, administration. (It would, I allow, assure you this is a pejorative aside, yet events argue otherwise. But no matter. I digress. It appears the aged have been shabbily used.)

We will, in any case, let the record speak for itself. In our national news from AMA is a brief report on the conference. We also carry a special communication from one of our colleagues who was an invited consultant to one of the conference committees. I invite—nay, urge—you to read them, and, considering the possibility that you will one day be vitally and personally concerned with these matters, suggest that you might wish to insure your future's interest by presently pursuing the matter in whatever way your desires, abilities, and pressure contacts lie.

If that last statement seems diffuse, obtuse, and abstruse, and to smack of federalese, it was not accidental. I am only seriously suggesting that you seriously consider whether your present fiscal interests outweigh your future livelihood and welfare, if any.

In short, I am simply suggesting that you might wish to put things in perspective. *Chacun à son goût*, which translates into the vernacular as "whatever turns you on."

J. B. T.



Chester K. Jones, age 60. Died December 6, 1981. Graduate of University of Rochester School of Medicine & Dentistry. Member of Consolidated Medical Assembly of West Tennessee.

Robert Earl McCown, age 85. Died December 4, 1981. Graduate of Vanderbilt University School of Medicine. Member of Lincoln County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

BRADLEY COUNTY MEDICAL SOCIETY

Richard James Baron, M.D., Benton

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Philip B. Bailey, M.D., Dalton, GA
Robert B. Callahan, M.D., Chattanooga
John Neil Galbraith, M.D., Chattanooga
Elaine Kingas McGhee, M.D., Chattanooga
Robert F. Phlegar, M.D., Chattanooga
Steven M. Thomas, M.D., Chattanooga
Sharlinda B. Turner, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

George Thomas Edwards, M.D., Jackson

CUMBERLAND COUNTY MEDICAL SOCIETY

Stanley L. Bise, M.D., Crossville
David Edward Campbell, M.D., Crossville
Donathan Miles Ivey, M.D., Crossville

FRANKLIN COUNTY MEDICAL SOCIETY

James D. Holliman, M.D., Winchester

LAKEWAY MEDICAL SOCIETY

Michael C. Carver, M.D., Morristown
Richard William Greene, M.D., Morristown
Charles E. Leonard, M.D., Jefferson City
J. Raymond Tindall, M.D., Morristown

NASHVILLE ACADEMY OF MEDICINE

John G. Pearson, M.D., Nashville
Lester L. Porter, M.D., Nashville

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Dudley H. Davis, M.D., Johnson City
Nicholas R. Loon, M.D., Mountain Home
Michael Perkins, M.D., Oneida

WILLIAMSON COUNTY MEDICAL SOCIETY

H. Bryant Savage, M.D., Franklin

Nat H. Swann, M.D., has been named chief of staff at Downtown General Hospital in Chattanooga. *John W. Laramore, M.D.,* has been appointed secretary of the medical staff.

The following TMA members have been inducted as Fellows of the American College of Physicians: *Stanley J. Bodner, M.D.,* Donelson; *Phil E. Orpet, Jr., M.D.,* Memphis.

TMA Members Receive AMA Physician's Recognition Award

Thirty TMA members qualified for the AMA Physician's Recognition Award during November, 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

James B. Bell, M.D., Seymour
Frederick J. Chapin, M.D., Cookeville
Evelyn E. Dresner, M.D., Knoxville
Beatrice L. Durham, M.D., Crossville
Joseph H. Fishbein, M.D., Nashville
Subbarao Gorantla, M.D., Chattanooga
John B. Hackworth, M.D., South Pittsburg
Robert G. Horn, M.D., Nashville
Orren W. Hyman, M.D., Sweetwater
Alfred P. Kraus, M.D., Memphis
Jay F. Lewis, II, M.D., Chattanooga
William L. Maden, M.D., Johnson City
Hossein Massoud, M.D., Chattanooga
Kit S. Mays, M.D., Memphis
Patrick J. Murphy, M.D., Memphis
Homer C. Ogle, M.D., Knoxville
Thomas H. Patterson, M.D., Franklin
Robert L. Richardson, Jr., M.D., Memphis
Burton M. Rudolph, M.D., Knoxville
Kenneth B. Rule, M.D., Knoxville
James A. Stanko, M.D., Chattanooga
James G. Stensby, M.D., Tullahoma
David E. Stewart, M.D., Brownsville
Gerald R. Summers, M.D., Lebanon
Kirkland W. Todd, Jr., M.D., Nashville
Robert F. Torstrick, M.D., Nashville
John B. Turner, M.D., Springfield
Thomas O. Vechinski, M.D., Chattanooga
Muriel L. Williams, M.D., Knoxville
Matthew W. Wood, M.D., Memphis

personal news

Joe F. Bryant, M.D., Lebanon, has been inducted as a Fellow of the International College of Surgeons.

George Eckles, M.D., Winchester, has been inducted as a Fellow of the American College of Surgeons.

From the AMA's Office in Washington, D.C.

Social Security Benefits Reviewed

The Social Security Administration has launched a sweeping review of the 4 million people receiving disability benefits. As many as 150,000 people may be dropped from the program this fiscal year. Social Security has alerted physicians to expect "a substantial increase in requests for medical reports."

The increase in requests for special consultative examinations "will be even more substantial because the majority of the beneficiaries will not have seen their own physician recently," Social Security said.

Additional physician consultants will be recruited by the State Disability Determination Services to handle the increased periodic review workload. More physicians to handle the consultative examination will be needed.

The crackdown results from a 1980 congressional law requiring Social Security starting this January to review nearly every disabled case at least once every three years. The basic purpose is to determine whether the beneficiary is currently unable to work.

Noting that beneficiaries may express concern to their physicians about the reviews, Social Security urged physicians to point out to their patients that they, the physicians, do not give an opinion or participate in the decision on whether the patients are disabled. These decisions are made only by the State Disability offices.

"Over the past few years, Social Security disability benefits came to be regarded by some beneficiaries as a permanent, lifetime entitlement—that benefits would continue until they retired, died or chose to go back to work," said Social Security. "So there is going to be a lot of unhappiness and confusion for the next two to three years as disability benefits are terminated for thousands of Americans."

Emphasized the federal agency: "Social Security disability benefits, in most cases, are intended as a temporary help until people can overcome their impairment and return to work." The benefits in the future will be used "only for those who are really unable to work because of a medically determinable disability—as the law intends."

The review of more than 500,000 claims this fiscal year has important implications for physicians, Social Security said, listing them as:

- The beneficiary's treating physician will be asked to furnish an updated report showing the patient's current condition.
- Where information from the treating sources is insufficient to make a new determination of disability, a consultative examination will be arranged to get the needed data.
- Some patients are going to be upset about having

to, in effect, reestablish their entitlement to disability benefits.

- In addition to state offices, Social Security's regional offices and headquarters will be looking for additional medical consultants. The agency estimates it will be spending almost \$240 million next fiscal year on payments for medical evidence of record and consultant examinations, compared with \$138 million last fiscal year and \$190 million in the current fiscal year. More than 800,000 cases are slated for review in the fiscal year that starts next October.

Social Security issued some tips for physicians with disabled patients:

- Patients may call soon after receiving notice their claims are to be reviewed. If the physicians have been seeing the patients regularly and have complete information about the impairments, they should advise the patients they will send in the medical reports promptly. The patients should be reminded that the physicians do not make the disability determination.
- If patients have not been seen recently, physicians may suggest a prompt, thorough examination.
- Patients may call physicians after notification they are not disabled within the meaning of the law. If physicians have already submitted a recent medical report, they should note that they had no part in the finding. But if a medical report for the review was not submitted, and the patient wishes a report, the physicians may want to conduct a special examination, since such beneficiaries have ten days to submit information for the government to reconsider its decisions.

Health Programs Cut Further

Congress has approved an extra 4% cut in most health programs as part of the stop-gap government spending bill meeting President Reagan's request for an additional \$4-billion reduction in funding levels.

Passage of the measure by House and Senate shortly before adjournment was a victory for the administration. President Reagan last September had called for new spending slashes. Last month he vetoed a continuing spending resolution that fell short of the President's budget goals.

The \$413-billion continuing resolution adopted by Congress runs through the end of March, but the lawmakers are likely next year to extend the resolution through the end of the current fiscal year, Oct. 1.

The budget situation for health programs at the moment is confused, but the measure basically calls for spending at a rate which is the lower of the House-passed Health and Human Services (HHS) Department appropriations bill or the Senate Appropriations Committee bill, along with an overall 4% reduction.

Medicare and Medicaid were not subject to the cut.

Congress added some funds for health programs, including \$16.5 million for the maternal and child health block grant and \$24 million for community health centers.

White House Conference On Aging

The White House Conference on Aging's 2,000 delegates approved some 600 recommendations including a "continuation of the search for a National Health Care Security plan."

Adopting on a single vote the reports of 14 separate committees, the conference went on record against many of the budget-cutting goals of the Reagan administration. The main subject of debate throughout the three-day session was Social Security. One committee suggested using general revenues to bolster the Social Security fund; another opposed it. But all of the proposals argued against any decrease in benefits.

The Health section of the conference called for a program that would cover long-term home health care for older people who aren't entirely self-sufficient but don't require hospitalization.

A prospective payment system should be set up for Medicare and Medicaid under which hospitals and physicians receive advance payment and reimbursement would be limited, a report recommended.

Medicare and Medicaid should cover home health care and services, according to one recommendation.

Federal subsidies for tobacco, alcohol, pesticides and harmful food additives should be dropped, the report said.

Medicare expansions that were proposed included outpatient drugs, dental care, eye examinations, and hearing aids. Expanded mental health benefits were also endorsed.

announcements

CALENDAR OF MEETINGS

NATIONAL

March 1-5	International Academy of Pathology, U.S.-Canadian Division—Sheraton Boston
March 3-6	American Association of Genitourinary

March 3-8	Surgeons—Canyon Hotel, Palm Springs, Calif.
March 5-10	International Conference of the Association for Children and Adults With Learning Disabilities—Conrad Hilton, Chicago
March 7-12	American Society of Abdominal Surgeons—Caesar's Palace, Las Vegas
March 14-20	American Society for Microbiology—Atlanta
March 14-20	American Society of Contemporary Medicine and Surgery—Diplomat, Hollywood, Fla.
March 15-19	American Society of Contemporary Ophthalmology—Diplomat, Hollywood, Fla.
March 15-19	American Burn Association—New Orleans
March 17-20	National Conference on Breast Cancer (sponsored by American College of Radiology)—Hyatt Regency Hotel, New Orleans
March 17-20	American Society for Clinical Pharmacology and Therapeutics—Contemporary Hotel, Lake Buena Vista, Fla.
March 17-22	Neurosurgical Society of America—Marco Island, Fla.
March 25-28	American Society of Regional Anesthesia—Hyatt Hotel, Monterey, Calif.
March 30-April 3	American Psychosomatic Society—Brown Palace, Denver
April 1-4	American Medical Electroencephalographic Association, LaFonda, Santa Fe, N.M.
April 3-5	American Medical Student Association—San Diego
April 19-22	American Medical Society on Alcoholism—Sheraton, Washington, D.C.
April 21-23	American College of Emergency Physicians—Marriott's Resort, Kaanapali Beach, Maui, Hawaii
April 25-27	American Surgical Association—Sheraton-Boston Hotel, Boston
April 25-29	American Society of Clinical Oncology—Stouffer's Riverfront Towers, St. Louis
April 26-29	American College of Cardiology—Atlanta
April 26-29	American College of Obstetricians and Gynecologists—Convention Center, Dallas
April 28-May 1	Southwestern Surgical Congress—Hotel del Coronado, Coronado, Calif.
	American Association for the History of Medicine, Washington, D.C.

STATE

April 14-17	Tennessee Medical Association 147th Annual Meeting—Hyatt Regency Hotel, Memphis
-------------	---

REWARD

A rewarding experience awaits those physicians who attend the Tennessee Medical Association's 147th Annual Meeting—April 14-17, 1982, at the Hyatt Regency Hotel in Memphis. Mark your calendar NOW so you won't miss out.

Tennessee Medical Association's

Exclusively Approved

**Disability Insurance
&
Major Hospital Insurance
Programs**

Administered By

Smith, Reed, Thompson & Ellis Co.

P.O. BOX 1280

NASHVILLE, TENNESSEE 37202

PHONE 255-7625

Manager

WILLIAM H. ELLIS, C.L.U.

Supervisors

ROBERT K. ARMSTRONG

THOMAS G. HENRY, JR.

ROBERT M. GARRIGUES

Underwritten

SINCE THE PROGRAM'S INCEPTION IN 1942

By

Commercial Insurance Company

Newark, New Jersey

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, Jr., M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

March 20-27	Current Issues in Obstetrical and Perinatal Medicine (Caribbean Cruise out of Miami)
April 15	Annual Frank H. Luton Lecture in Psychiatry (1 hour)
April 19-23	Annual James C. Overall Visiting Professor in Pediatrics (16 hours)
April 30	Annual Barney Brooks Lecture in Surgery (1 hour)
April 30-May 1	Southern Society of Clinical Surgeons and the H. Wm. Scott Society, Scientific Sessions
May 19-20	21st Annual Seminar in Psychiatry (for nonpsychiatrists) (11 hours)
July 7-10	Vanderbilt/Bowman Gray Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July 27-31	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)

For information contact Division of Continuing Medical Education, Vanderbilt University School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.

Dermatology.....	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology.....	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine.....	Edward A. Mays, M.D.
Hematology/Oncology.....	Robert S. Hardy, M.D.
Neurology.....	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics and Gynecology.....	Henry W. Foster, M.D.
Ophthalmology.....	Axel C. Hansen, M.D.
Orthopedics.....	Wallace T. Dooley, M.D.
Pathology.....	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics.....	E. Perry Crump, M.D.
Surgery.....	
General.....	Louis J. Bernard, M.D.
Neurological.....	Charles E. Brown, M.D.
Thoracic and Cardiovascular.....	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology.....	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

This comprehensive listing of UTCHS courses includes programs of the Chattanooga, Knoxville, and Memphis units. The codes (C), (K) and (M) indicate the continuing education unit handling the arrangements for a particular program.

March 14-19	(M)	15th Annual Family Practice Review Course
April 5-7	(K)	Hypertension
June 10-12	(K)	ENT and Otolaryngology

Community-Based CME

Knoxville Campus

Blount Memorial Hospital; Maryville, Tenn.
Every Tuesday; 7-8 a.m. (1 hr. credit)

Jellico Hospital; Jellico, Tenn.
Monthly, third Tuesday; 7-9 p.m. (2 hrs. credit)

Morristown-Hamblen County Hospital; Morristown, Tenn.
Alternate months, third Tuesday; 6:30-8 p.m. (1.5 hrs. credit)

Sweetwater Community Hospital; Sweetwater, Tenn.
Monthly, second Wednesday; 12:00 noon (1 hr. credit)

Takoma Hospital; Greeneville, Tenn.
Monthly, dates vary; 6:30 p.m. (1-2 hrs. credit)

Memphis Campus

UPDATES IN MEDICINE

Carroll County Hospital; Huntingdon, Tenn.

McKenzie Memorial Hospital; McKenzie, Tenn.

Henry County Hospital; Paris, Tenn.

Monthly, third Monday; 6:15-9 p.m. (2 hrs. credit); locations rotate.

Nashville Memorial Hospital, Madison, Tenn.
Monthly, third Tuesday; 12:00 noon (1 hr. credit)

If you would like assistance in planning a community-based CME program, contact the Associate Dean for CME and every attempt will be made to assist you through one of our three campuses.

For further information about any of these courses, please call the appropriate individuals below:

- (C) Mr. LeRoy J. Pickles, Chattanooga
Tel. (615) 756-3370
- (K) Ms. Kay Laurent, Knoxville
Tel. (615) 971-3345
- (M) Ms. Grace Wagner, Memphis
Tel. (901) 528-5547

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

BAPTIST MEMORIAL HOSPITAL

March 4-6	The Hypothalamus in Health and Disease: Reproduction, Growth, Feeding, and Behavior
March 26-27	Psychiatry for the Primary Care Physician
April 30-May 1	Current Controversies in Chron's Disease
May 6-8	Gynecological Surgery
May 21-22	Hypertension: 1982

For information contact Educational Support Services, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

UNIVERSITY OF MISSISSIPPI

March 11-13	9th Annual Surgical Forum—Holiday Inn Downtown, Jackson, Miss. <i>Credit:</i> 17 hours AMA Category 1. <i>Fee:</i> \$250.
-------------	---

For information contact Continuing Education, University of Mississippi Medical Center, 2500 N. State St., Jackson, MS 39216, Tel. (601) 987-4914.

MEDICAL COLLEGE OF VIRGINIA

- April 22-24 Pediatric Springfest—The Williamsburg
Hospitality House, Williamsburg, Va.
April 23-25 Emergency Medicine for the Primary Care
Physician—Fort Magruder Conference Cen-
ter, Williamsburg, Va.

For information contact Kathy E. Johnson, Box 48, MCV
Station, Richmond, VA 23298, Tel. (804) 786-0494.

INT'L. MEDICAL EDUCATION CORP.

EKG Interpretation and Arrhythmia Management

- April 16-18 Holiday Inn, Williamsburg, Va.
Aug. 13-14 Hyatt Regency, Nashville
Aug. 13-15 Hilton Head Hyatt, Hilton Head, S.C.

Clinical Management of Coronary Disease and Exercise
Testing

- July 30-Aug. 1 Lodge of Four Seasons, Lake of Ozarks,
Mo.

Arrhythmias and Cardiac Ischemia: Diagnosis and Manage-
ment

- April 23-24 Peachtree Plaza, Atlanta
June 11-13 Holiday Inn on Ocean, Virginia Beach, Va.

Cardiac Rehabilitation

- May 14-15 Sheraton Hotel, St. Louis

For information and complete course schedule contact Di-
vision of Postgraduate Education, International Medical
Education Corporation, 64 Inverness Drive East, Engle-
wood, CO 80112, Tel. (800) 525-8561.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

- March 2-5 Emergency Medicine/Trauma—Tamarron
Resort, Durango, Colo.
July 26-28 Pediatric Update 1982—Kiawah Island,
S.C.
Aug. 2-6 Taxes and Investments—Hilton Head Is-
land, S.C.
Aug. 9-11 High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Educa-
tion, Medical College of Georgia, Augusta, GA 30912, Tel.
(404) 828-3967.

NORTHWESTERN UNIVERSITY

- March 8-12 Sports Medicine Postgraduate Course—
Maui, Hawaii. *Credit:* 25 hours AMA
Category 1.

For information contact Bates Noble, M.D., Northwest-
ern University Center for Sports Medicine, 303 E. Chicago
Ave., Chicago, IL 60611.

PENINSULA HOSPITAL'S 10TH ANNIVERSARY SYMPOSIUM

In conjunction with the 1982 World's Fair
April 28, 29, & 30, 1982

- The Problem Patient
- Depression
- Problems of Adolescence
- Sleep Disorders
- Chemical Dependency

Faculty

- | | |
|------------------------|----------------------|
| G. Douglas Talbott, MD | Roger Goetz, MD |
| Kenneth O. Jobson, MD | Joe King, MD |
| D. Steve Goudelock, MD | Bob Booher, MD |
| James E. Becker, MD | William Anderson, MD |

For more information call or write Mrs. Janice
Akers, Peninsula Hospital, Louisville, TN 37777,
Phone (615) 573-7913 or (615) 983-8216.

*Limited rooms available for grand opening
of 1982 World's Fair on May 1.*

TEN-DAY NONMEDICAL CARDIAC TREATMENT PROGRAM

Diet, exercise, stress management, and cognitive re-
structuring of type A's for postmyocardial infarction
patients and persons seen as "at risk" by their physi-
cians. Scenic hunting lodge in Smoky Mountains—not
a resort. Accepting referrals for 1982 season—\$2700
total.

For information contact:
Institute for Improved Living
P.O. Box 478
Dillsboro, NC 28725
Phone 1-704-258-4580

RENT MY CONDOMINIUM* AT HILTON HEAD ISLAND SOUTH CAROLINA

For more information contact:

Tom Reed
Attention: Mrs. Parton
117 East Main Street
Murfreesboro, Tennessee 37130
Telephone: (615) 890-6464

**Ocean Front—2 Bedrooms*

BE THE DOCTOR YOU WANT TO BE. IN THE NAVY.

The Navy is seeking physicians who want an alternative to the administrative burden and expense of private practice. Our modern medical facilities provide the latest techniques and equipment. Opportunities exist to do research on projects both exciting and clinically meaningful, including aerospace and submarine medicine, underwater physiology and environmental and preventive medicine. Professional allowances in addition to competitive salaries. Non-taxable quarters and subsistence allowances. Thirty days' paid vacation earned each year. Insurance, medical, dental package.

For more information, contact:

Mike Maher
Medical Program Recruiter
Navy Recruiting District Nashville
1808 West End Ave. • Nashville, TN 37203
In Nashville (615) 251-5571
In Tennessee (800) 342-8629

OB-GYN DIRECTOR NEEDED

Opening for Director of Residency Training Program in Obstetrics and Gynecology with the Pensacola Educational Program, Pensacola, Florida, for Board Certified physician. Total program of 60 residents in six different residencies (ten residents in four-year Ob-Gyn Program) associated with four different hospitals in community-based educational program. Salary competitive with excellent fringe benefits of paid vacation, liability insurance, health/disability insurance, paid educational and professional trips. Program affiliation with several large medical schools. Gulf Coast living at its best, and health care in immediate area of over 1/4 million.

If interested in teaching and patient care, call collect: Dr. R. D. Nauman, Director of Medical Education, 904/477-4956, or send curriculum vitae to Director of Medical Education, Pensacola Educational Program, 5149 North 9th Avenue, Suite 307, Pensacola, Florida 32504.

FAMILY PHYSICIAN NEEDED

Family Physician to join two-man family practice next door to 300-bed hospital. Excellent privileges. Salary guaranteed with fringes and incentives. Partnership at end of second year.

Contact E. P. Dickerson, M.D., Westside Family Physicians, Suite 5500, 2010 59th Street West, Bradenton, Florida 33529, Telephone (813) 792-2211.

SUPPORT YOUR ADVERTISERS

Many of the advertisers in this Journal are long-standing patrons of our monthly publication. Their products and services are of the highest quality available. Don't take them for granted. Read their ads!

Medicine and Government— A China Experience

GEORGE W. HOLCOMB, JR., M.D.

In May of this year I had the opportunity to visit mainland China and Taiwan with a group of physicians on a "People-to-People" tour. This internationally recognized program was established by President Eisenhower in 1956 with the idea of promoting better relations between the peoples of all nations throughout the world. He was convinced that peace would be secured if people of similar occupations could bypass their political leaders and meet with their counterparts in other countries for the exchange of information and the development of understanding and friendship. Although this program was initially sponsored by the U. S. Department of Information, its function was later assumed by a private foundation to avoid any political overtones and governmental influence. It has nevertheless continued to receive the unofficial blessings of our State Department, and for this reason these trips are unique. I hope anyone who has the opportunity will join such a group.

Historically, Sun Yat-sen in 1912 led the movement to end the rule of the emperors and to unify the provinces of China into a single nation. Although his promise of "land to the tiller" gained support of the peasants, who represented 85% of the population, he met with only mini-

mal success. His dream was transferred to his son-in-law and eventual successor, Chiang Kai-shek, who realized he could accomplish very little without cooperation of the land barons, but they, like so many property owners, were totally disinterested in agrarian reform. Because of Chiang's failure to accomplish any significant change, his peasant support shifted to the communist movement; Mao Zedong adopted this same program of land reform in his rise to power, which culminated in the defeat of Chiang by the Chinese Peoples Army in 1949.

After this bloody campaign, Chiang Kai-shek evacuated over 1 million of his soldiers and much of the art treasures from Shanghai to Taiwan, where he established a capitalistic government based on a free enterprise system. Both of these politically divergent forms of government have had a profound effect on the people, their economy, and the practice of medicine within each country. It is this relationship of government to medicine and the effect on the people of both Chinas that I wish to discuss further.

Following the communist victory and the birth of the Peoples Republic of China in 1949, four basic principles for improvement in health care were established. Medical service to workers, peasants, and soldiers was the first priority. The

Presented as the Presidential Address to the Nashville Surgical Society, Nov. 4, 1981.

second priority was the teaching of preventive medical practices. The third stated goal was development of a workable combination of Western medicine with traditional Chinese practices, and the fourth ambition was extension of public health measures to rural areas.

The vastness of the country and the remoteness of its numerous isolated communities presented an almost insurmountable task in the search for improvement of the health status of the Chinese people. Nevertheless, during the next 14 years widespread opium addiction was curtailed, prostitution and venereal diseases were virtually eliminated, pests, flies and mosquitos were eradicated, and sanitation was greatly improved. Considerable emphasis was placed on everyone's receiving a balanced diet and daily exercise. In addition, large numbers of physicians, midwives, and nurses were trained, and new medical schools were established. In spite of this massive undertaking, by 1965 there was still only one physician for every 5,000 Chinese (United States, 1/600) and one hospital bed available for every 1,000 persons (United States, 1/100). Nevertheless, visitors returning to China were greatly impressed by the radical changes that had been made, with obvious improvement in sanitary conditions and the general health of the people.

In 1965, one year before the cultural revolution began, Mao openly criticized his Ministry of Health for its emphasis on theoretical knowledge, excessive length of medical training, lack of research on common diseases, and inadequate provisions for rural medicine, some of the same criticisms being leveled at the medical system in the United States today. This open attack on the medical establishment resulted in immediate de-emphasis of the educational and the professionalized system of medicine, leading to great alteration of the entire health care program during the cultural revolution of 1966 through 1976. During this ten-year period physicians and medical professors, along with the other professionals, were required to rotate to the communes and work in the fields as laborers. Medical schools were closed; when they reopened, radical changes were made in the selection and training of students. The brightest students in the country were chosen for science schools and the next academic level was directed into engineering. The third group was assigned to medicine,

and those scoring last on the achievement test found themselves in the art schools. All aspects of medical education were de-emphasized and the teachers were told six months should be long enough to train a physician. Apparently examinations were not considered important during the cultural revolution and few students were flunked. Professor Chi at Hangzhou Medical School said, "We were afraid we would ourselves be punished for ineffective teaching if we turned in a failing grade."

Under this new curriculum, emphasis was placed on training 1 million barefoot doctors and 3 million health aides to perform simple diagnostic and treatment techniques. The "barefoot doctor" is not a physician, but a paramedic trained for only two or three months. He is the backbone of the health care system and is the closest medical contact to the people. He practices first aid in rural communities and provides prenatal care for uncomplicated pregnancies. Those with more serious illnesses must be referred to the commune hospital and, when necessary, the patient may then be transferred to larger city hospitals for more specialized treatment.

Things have now changed again, so that today China is dedicated to modernization in four major areas by the year 2000: science, including medicine; industry; agriculture; and national defense. The foundation of this latest program is directly related to control of population growth. The government requires its youth to delay marriage until their late 20s, and makes marriage difficult even then. Birth control clinics, where educational literature, pills and contraceptive devices are distributed without charge, have been established in each community. Abortions are encouraged and are provided at government expense upon request. Perhaps the most persuasive restriction is the economic effect of penalizing a family for having more than one child. A government subsidy is given every family with a single child, but a reduction of 10% in annual income is levied on parents for each additional baby. It is also noteworthy that health care in China is free only to those over 18 years of age, in other words, only to the productive worker or the retired. Families are obligated to pay for in-hospital or outpatient care for children up to the age of 18 years.

Modernization in medicine will be more difficult, because hospital facilities, equipment, and medical expertise are today 20 to 30 years behind

those of the United States and other industrial nations. The operating rooms and radiographic equipment reminded us of those we saw in our municipal hospitals in the late 1940s and early 1950s. Open buret intravenous fluid sets are still being used, and no Rh negative blood is available. The Chinese readily admit their deficiencies and openly blame their failure to progress on the adverse influence of the Gang of Four.

Since the end of the cultural revolution in 1976, the pendulum has swung back toward methods of selecting and training medical students much like those used in the United States. In 1978, after only two years, the ratio of physicians had increased to one in 3,000 and hospital beds to one in 500. The rural health care system has been expanded greatly, and barefoot doctors now number over 1.5 million. Students are better prepared in their middle schools, and five years are required for graduation from medical school. Advanced specialization is available for a few trainees upon recommendation by the faculty, but the remainder must enter some type of practice after two years of internship. Young residents usually are not allowed specialized training in foreign countries, a privilege still limited to middle-aged or senior physicians who are more likely to return to the homeland. On the other hand, foreign teams of specialists are enthusiastically received by Chinese physicians, and all foreign medical journals and textbooks become prized possessions.

One of the major obstacles in organizing an adequate medical delivery system has been the difficulty in combining the ancient Chinese methods with the advanced modern medical techniques of Western countries. Upon entering a hospital each patient is given a choice of Western medicine or traditional therapy, including acupuncture. This choice is offered for treatment of tumors, acute and chronic diseases, or simply for the relief of pain. The traditional method includes emphasis on diagnosis by careful inspection of the patient, study of his tongue, and meticulous palpation of the pulse. Treatment consists of moxibustion, acupuncture, and medication with various plant leaves and herbs. The stores are full of patent medicines and herbs, including, incidentally, the ginseng root from Tennessee. Ancient Chinese teachings associated disease with imbalance of Yin and Yang (cold-hot). For instance, if a Chinese were to develop diarrhea after eating cold rice, he

would change his diet to hot foods the following day in order to correct the imbalance of cold and hot. For many years surgery was not considered because of the belief in the sacredness of the human body and the desire for it to remain intact for the hereafter. Actually it was only as recently as 1913 that the first autopsy was performed.

We were, of course, eager to learn about the use and effectiveness of acupuncture as an anesthetic. We were told it is used in only 5% to 10% of the cases now, and is usually confined to operations on the head and neck, where it is claimed to be about 80% effective. Apparently premedication and local infiltration agents are combined with acupuncture needle injections, because the statement was made that if more than 10 ml of procaine are necessary, the anesthetic is considered a failure for that particular patient. Acupuncture has been almost completely abandoned as an anesthetic agent for abdominal and thoracic operations, and its most widespread use today is for pain relief, particularly in the upper half of the body.

As pediatric surgeons we found our counterparts sincerely dedicated and anxious to improve their knowledge of recent Western advances, but we did not observe any innovative or new surgical techniques being researched. We did see different criteria in use for selection of surgical operations for various congenital anomalies. For instance, because of improved survival rates American and European pediatric surgeons prefer initial colostomy for neonates with rectal atresia and Hirschsprung's disease, the definitive operative procedure being delayed until the child is about 12 months of age. In China, however, since only one child is allowed per family, parents and close relatives almost demand a perfect heir, and the grandparents, who usually care for children of working parents, will not accept the responsibility for colostomy care. Hence, considerable pressure is placed on the surgeon to do a primary definitive procedure regardless of the increased risk. While it is hoped that the infant will live, if it doesn't, the parents will have another baby later. We were distressed by this lack of consideration given the infant's right to life, although we realized serious economic factors directly influenced the decision. We sensed that several of the Chinese pediatric surgeons also found this a traumatic emotional experience.

Undoubtedly, great strides in medical progress will take place under this new government

regime. The physicians and the present leadership appear determined to upgrade the level of the health care system to that of the industrial nations of the world, and they are successfully merging, however slowly, their system of indigenous medicine with modern Western knowledge and technical skill. The Chinese people are healthy, happy, and seemingly dedicated to their government's goals.

We left the leisurely pace of traditional China and entered modern China on Taiwan, technically the island province of the Republic of China. This beautiful island, with subtropical climate, palm trees, and pineapple and other fruit farms is reminiscent of Hawaii. Taiwan, shaped like a tobacco leaf, is only 240 miles long by 85 miles wide and has a population of 18 million, including 150,000 aborigines. It has a colorful history, the Dutch, Spaniards, Chinese and Japanese all having occupied the island at different times, each contributing greatly to its culture. This small country has one of the best transportation networks in the world. The Chiang Kai-shek International Airport is considered the most modern air facility in Asia. A spectacular highway goes from the East Coast to the West through its scenic mountains, some of which reach 10,000 feet above sea level. In this capitalistic country citizens elect their city and county government officials and the members of a provincial assembly, whose functions are similar to those of our state legislature. Farmers not only are allowed to purchase their own land, but benefit totally from its harvest. Businessmen own their shops or factories and professionals such as lawyers, dentists, and physicians charge on a fee-for-service basis. The Taiwanese have achieved the second highest standard of living in East Asia, just below that of the Japanese.

Taipei, a city of 2 million people and the largest on Taiwan, is the administrative seat of government. It is much like any large American city on the move, with tall buildings, museums and modern hotels. Unlike mainland China, where tipping was almost a social offense, this old American custom is well established and expected, particularly in the larger cities. We were immediately aware of a bustling way of life as we watched motor scooters dart in and around the buses in the downtown area. It was evident that this country was almost totally motorized,

whereas the China we left traveled by bicycle.

"Hospitals in Taiwan have obtained all the modern and sophisticated equipment which we possess in the United States. Public health, water and sanitation controls are strictly enforced. Seven medical schools are scattered throughout the country, and only those students with the highest academic rating are accepted for training. Six years beyond middle school are required for the degree of doctor of medicine. Most of the medical school faculty have received training in the United States, as medical residents and young physicians travel to Western countries for graduate education apparently without much restriction.

The largest hospital in Taipei is the Veterans General Hospital, with 1,600 beds; it was originally built to rehabilitate military veterans, but now offers not only services to veterans but comprehensive care for men, women, and children as private patients. The caliber of surgery we observed was excellent and comparable to our own. A prepaid health insurance program is available for those who wish to subscribe, and this means of financing health care is gaining widespread acceptance.


I was pleased with the opportunity to renew a friendship with Dr. Chou-fu Wei, who currently is chief of pediatric surgery at the Veterans General Hospital. He received some of his residency training in pediatric surgery at Vanderbilt University and later at LeBonheur Children's Hospital in Memphis.

Although acupuncture is available, it is limited to special situations. Unlike what we had observed on the mainland, patients are permitted to make this choice only with prior medical screening. At the Taipei Veterans Hospital, physicians are conducting active research, and are evaluating the merits of acupuncture by objective analysis. If a patient in Taiwan complains of a headache or backache, he is evaluated by physicians first, then, if all roentgenographs and other studies are within normal limits, the patient may choose acupuncture. It is very likely that some of our own neurosurgeons and orthopedists would like to have an acupuncturist to whom they might refer patients in this particular category.

Not only have the people of Taiwan benefited from the economic development established under the Japanese occupation prior to World War II, but the island's small size and currently manageable population are assets rather than

liabilities. The improved standard of living, the healthy economy, and the vastly superior medical care and hospital facilities of this capitalistic country remain firmly imprinted in our memory, particularly when contrasted with mainland China under communist domination.

Undoubtedly, it is too simplistic to attribute all credit or blame for present conditions on the particular form of government in the two Chinas, as many other factors certainly play a vital role. The culture, ancient tradition, and size of mainland China, as well as the rigid governmental structure, have all contributed to its economic

and medical underdevelopment. This China experience, however, has demonstrated to me the profound influence government can exert directly on the health care system and those who practice within it. Results can be beneficial or disastrous, depending upon the direction pursued by the leadership. It should serve as a constant reminder for each of us to support and demand that organized medicine in our own country provide an informed voice and maintain an active role in health care planning in the 1980s. 

218 20th Ave. North
Nashville, TN 37203

APRIL 1982						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
				1	2	3
4	5	6	7	8	9	10
11	12	13	14	15	16	17
18	19	20	21	22	23	24
25	26	27	28	29	30	

**TMA 147th ANNUAL MEETING
Hyatt Regency Hotel — Memphis**

Blindness in Tennessee in 1980-1981

STEPHEN S. FEMAN, M.D. and MARSHA K. PENN, M.D.

Blindness is a nonspecific word used to describe an impairment of the visual system. Although it is usually assumed that total blindness implies inability to distinguish light from dark, an individual with a less severe deficit such as a visual acuity with best correction of 20/200 or poorer in the better eye, or a visual field constricted to 20° or less in the better eye, can be "legally blind."

Since the methods of disease prevention and treatment often change, the causes of blindness in our community will differ from year to year. Sometimes rare disorders increase in frequency and appear to have epidemic patterns. For example, 20 years ago diabetic retinopathy was seldom reported; however, now it is thought to be one of the most common causes of blindness in the United States.¹ Whether this nationwide trend is representative of the changes in causes of blindness in Tennessee was not known. Therefore, in order to find the causes of blindness in our state, and to aid in directing current teaching and research commitments, the following study was initiated.

Methods

Within the Tennessee Department of Human Services is the Division of Services for the Blind. In order to qualify for assistance from this program an applicant is required to have an eye examination. Between July 1, 1980 and June 30, 1981, 7,280 persons applied for aid with this program. During the year studied, vision of almost all of the applicants could be improved by the use of eyeglasses to a level at which they were no longer blind. Those few who could not be helped by spectacles were referred to ophthalmologists for a detailed medical evaluation to verify the blindness. If medical or surgical therapy could reverse the disorder or prevent it from progressing to total blindness, the ophthalmologist would then suggest the treatment and in-

clude these data in the report. These forms were reviewed in detail.

Results

During this study 7,280 eye examinations were performed. Only 539 blind eyes were found. All the other individuals, although they had thought themselves blind, were only in need of new glasses.

The causes of blindness are listed in Table 1. Cataracts are the most common cause of blindness in new applicants in this state. The combination of cataracts, trauma, amblyopia, macular degeneration, and diabetes accounted for almost 80% of the new blind eyes during this year. At the other end of this scale are disorders such as retinitis pigmentosa and albinism which are represented by only a few cases each year.

Discussion

Many blind persons in Tennessee do not apply for assistance from the Division of Services for the Blind. The National Society for the Prevention of Blindness estimates that there are 1,000 new blind in Tennessee each year,² or 2,000 blind eyes; therefore, our sample represents only 25% of the total new blind population. Since our study includes applicants for assistance only, some pre-selection of patients by economic status is present. Most ophthalmic disease processes are not thought to follow financial guidelines, but there may be many preventable disorders in our study population because care was not sought soon enough. Nevertheless, we believe that the percentage distribution of blinding diseases may be typical of the larger population.

Cataracts are the cause of almost one third of the new cases of blindness in the state. Most are of the typical aging variety, and reflect the greater life expectancy in our population. It is interesting to note that once an individual qualifies as being blind, he also qualifies for medical benefits. One would expect, therefore, that these individuals would soon have these cataracts removed and their vision restored.

Trauma is the second most common cause of new blindness. Almost all of these cases are pre-

From the Department of Ophthalmology, Vanderbilt University Medical Center, Nashville.

Presented, in part, at the Tennessee Public Health Association Meeting, Oct. 14, 1981.

Reprint requests to Department of Ophthalmology, Vanderbilt University Medical Center, Nashville, TN 37232 (Dr. Feman).

TABLE 1

NEW BLIND AID APPLICANTS IN TENNESSEE FROM
JULY 1980 THROUGH JUNE 1981

Cause	Percent
Cataracts	34.3
Trauma	13.9
Amblyopia	13.7
Macular Degeneration	11.7
Diabetes	5.0
Retinal Developmental Defect	4.8
Glaucoma	3.2
Histoplasmosis Syndrome	2.8
Nystagmus	2.2
Retinal Detachment	1.6
Corneal Developmental Abnormality	1.4
Myopic Degeneration	1.2
Retinal Vascular Occlusion	0.9
Albinism	0.7
Retinitis Pigmentosa	0.7
Uveitis (Type Unknown)	0.7
Macular Hole	0.37
Vitelliform Macular Degeneration	0.37

ventable, and an awareness of ocular dangers should reduce this rate. The mandatory requirement of safety shields in occupational activities has stabilized one aspect of ocular trauma. However, eye injuries from home accidents or during sports activities do not seem to be coming under control.

The most common variety of amblyopia in this state is associated with an eye muscle weakness. This often results in a child forgetting to use the information sent to the brain from one eye; since that eye is aimed in the wrong direction, it is sending misinformation, and the child learns to not be aware of what that eye sees. After some time, that eye is taught to be permanently blind even though the visual sensory apparatus is intact. In most situations, adequate care by an ophthalmologist could have preserved vision in the eye, as the weak muscles could be corrected by a minor operation.

Most forms of macular degeneration represent an aging change of the choroidal circulation, resulting in the formation of a large blind spot in the center of the visual field and a reduction of the visual acuity to the level of legal blindness. However, the peripheral vision remains intact in most individuals. Some varieties of this disorder can be benefited by laser photocoagulation. At present, there are numerous studies organized by the National Institutes of Health to develop means of preventing this disorder. Until the results of such studies are available, however, one

should expect an ever-increasing incidence of this disorder as our population grows older. It has been reported in other states that over one third of the new admissions to homes for senior citizens are blind from this disorder.³

Diabetes, in the form of diabetic retinopathy, is the cause of 5% of the new blind eyes in Tennessee. Almost all of this is preventable. Within the past five years the results of the National Institutes of Health-sponsored Diabetic Retinopathy Study have demonstrated that 90% of diabetic blindness can be prevented by photocoagulation therapy.⁴ It is only by instituting therapy early in the disease that such treatment is effective. A closer relationship between ophthalmologists and the physicians caring for individuals with diabetes mellitus needs to be established in order to significantly reduce this percentage.

Tennessee appears to be in the center of histoplasmosis infection in the United States. More individuals are hospitalized in this state than in any other for treatment of this disorder.⁵ Nevertheless, it remains a relatively uncommon ocular problem. In some individuals the ocular manifestations can be controlled by photocoagulation therapy, but it is most important to note that skin testing such individuals can cause a severe reactivation of the ocular problem. A close working relationship between an ophthalmologist and the physician caring for the pulmonary symptoms is needed for the overall care of such patients.

Summary and Conclusion

There were 539 new blind eyes evaluated by ophthalmologists and reported to the Division of Services for the Blind in Tennessee this year. The most common, cataract formation, is correctable by surgery. The majority of the remaining causes can be prevented if medical therapy is initiated early enough.

Acknowledgment:

This investigation was supported, in part, by NIH grant # 5 T32EY07007, and an unrestricted grant from Research to Prevent Blindness, Incorporated, of New York.

REFERENCES

1. Stross JK, Harlan WR: The dissemination of new medical information. *JAMA* 241:2622-2624, 1979.
2. Vision Problems in the United States. National Society to Prevent Blindness. New York, 1980.
3. Kornzweig AL, Feldstein M, Schneider J: The eye in old age. *Am J Ophthalmol* 44:29-33, 1957.
4. The Diabetic Retinopathy Study Research Group: Photocoagulation treatment of proliferative diabetic retinopathy. *Ophthalmology* 85:82-105, 1978.
5. Fraser DW, Ward JJ, Ajello L, et al: Aspergillosis and other systemic mycoses. *JAMA* 242:1631-1636, 1979.

Umbilical Vessel Trauma: A Potentially Fatal Complication Of Amniocentesis

C. JOHN PAINTER, M.D. and R. DANIEL BRAUN, M.D.

Although a rare occurrence, umbilical cord puncture is a recognized complication of amniocentesis. A delay in the diagnosis may lead to fetal death, particularly if the umbilical vein is injured.

Case Report

At 38 weeks gestation a 26-year-old gravida 1, para 0, underwent amniocentesis for fetal maturity assessment. B-Mode ultrasound showed a low-lying anterior placenta, the edge of which lay 8 cm above the symphysis, and a pocket of amniotic fluid in the left lower quadrant, lateral to the fetal head. There was a single fetus in the vertex presentation.

Amniocentesis was performed with a 20-gauge spinal needle, with the fetal head held to the right and the needle slanted toward the uterine wall. The initial 4 to 5 cc of fluid was clear and contained vernix; fluid return stopped. The stylet was replaced and the needle was retracted 1 to 2 cm. When the stylet was removed, blood returned. Because it was felt the needle was still in the uterine cavity, approximately 2 cc of blood was collected and sent for identification by Fetaldex®. When the subsequent report was 100% fetal blood, the needle was removed and fetal heart monitoring was begun.

By listening with a fetal stethoscope, it was noted that the fetal heart rate would periodically slow to a rate of 60 beats per minute for up to two minutes at a time before returning to 120 beats per minute. Although several contractions were palpable, the slowing of fetal heart rate was not related to the contractions, and cesarean delivery was carried out.

At surgery, a uterine subserosal hematoma was found at the site of the amniocentesis, and the low transverse uterine incision was made 1 cm above this area. The lower edge of the placenta was 2 cm above the incision. The amniotic fluid was bloody. An Apgar 9/9, 3,264 gm (7 lb 3.5 oz), female infant was delivered, and the cord and placenta were delivered and inspected after obtaining cord blood for hemoglobin and hematocrit.

About 46 cm (18 in) from its insertion at the umbilicus, a through and through puncture of the cord was found. This segment was removed and the vessels cannulated. When milk was injected into the umbilical vein, no extravasation was noted, but when povidone iodine (Betadine) was injected



Figure 1. A section of the umbilical cord with Betadine injected in the umbilical artery showing spillage of Betadine through the puncture site and confirming puncture of the umbilical artery.

into one of the umbilical arteries extravasation occurred at the puncture site (Fig. 1). There were no needle marks on the infant.

Review of Literature

There are numerous reports of complications following amniocentesis. The literature is mainly concerned with genetic amniocentesis or amniocentesis done in the second trimester. Bloody taps are reported occurring as frequently as 40% by microscopic examination of the fluid, or 15% by gross examination,¹ and fetal bleeding occurs in from 0.3%² to 10%³ of amniocenteses. Most have resulted in no apparent fetal harm, but a variety of problems, including intrauterine fetal deaths, gross anatomical defects, and intrauterine amputations, have been described.⁴⁻⁸

Placental localization is important in preventing or lessening the number of bloody taps. Kerény⁹ shows that ultrasonography preceding amniocentesis reduces the incidence of bloody taps from 8% to 12% when taps were not preceded by ultrasound to 2% when preceded by ultrasound. Nelson¹⁰ shows a reduction in bloody

From the University of Tennessee Clinical Education Center, Chattanooga. Dr. Painter is now in private practice in North Carolina. Dr. Braun is now with the University of North Dakota, Grand Forks, N.D.

Reprint requests to Department of Ob/Gyn, University of North Dakota, 221 S. 4th St., Grand Forks, ND 58202 (Dr. Braun).

taps from 15% to 6% with the use of real-time ultrasound. Platt¹¹ and Harrison¹² have shown similar results.

It is recommended that external fetal heart monitoring be done immediately following amniocentesis in a potentially viable pregnancy since it is known that exsanguination can occur even in the presence of clear amniotic fluid.^{2,11,13,14} The time from amniocentesis to fetal death following bloody taps has been reported as 1½ to 5 hours.¹¹

Laceration of umbilical vessels has been reported in nine cases. Six of the nine fetuses survived. In four cases, a nuchal cord was present. Since a nuchal cord is not free to float in the amniotic fluid, cord puncture becomes more likely. Only four presented with bloody amniotic fluid. The fetal heart tones in three were also abnormal. In one case, fetal exsanguination occurred following a clear fluid tap, but the fluid was bloody at the time of amniotomy.¹⁴

Fetal bradycardia, or more characteristically variable decelerations of a severe nature, may occur following the bloody taps, especially if an umbilical artery is punctured.

In the three cases in the literature where monitoring after amniocentesis showed abnormalities, they were of the deceleration type not unlike severe variable decelerations except for being unrelated to contractions. It is theorized that injury to the cord, as in clamping, will set off a neural reflex causing bradycardia and then a return to baseline. This does not appear to be related to the amount of blood lost. The presence of fetal bradycardia or decelerations after a bloody tap due to fetal blood call for immediate delivery.¹³ Gassner¹³ presents an excellent flow diagram for the management of amniocentesis with bloody fluid return. The usefulness of the flow diagram is emphasized (Fig. 2).

Discussion

Bloody fluid is a potentially ominous sign. Though the blood may be from many sources, most often it is from the uterine wall and is of little consequence. Other common possibilities are the puncture of a fetal vessel on the placenta, the placenta itself, or fetal trauma.¹⁵ Actual perforation of the umbilical cord is rare, but its diagnosis and management must be immediate.^{4,13}

Careful examination of the patient prior to amniocentesis is essential. Uterine size and Leopold's maneuvers should be done.¹¹ Indications for the amniocentesis should be reviewed.

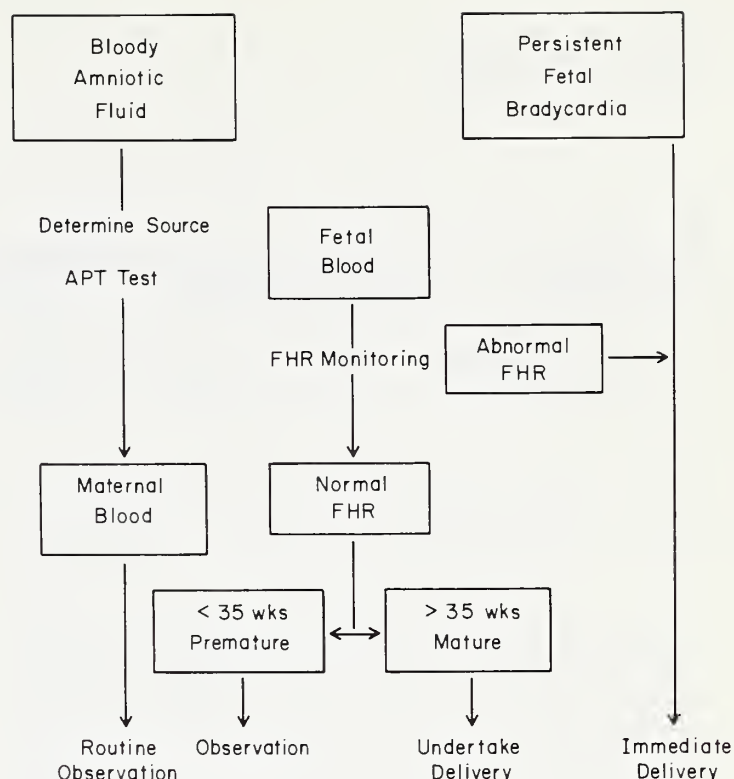


Figure 2. Flow diagram for management of complications of amniocentesis (from Gassner and Paul¹³).

The cervix should be assessed, and ancillary studies such as B-scan or real-time scanning should be performed just prior to the procedure.^{2,16} The procedure itself should be done in a carefully selected site designed to avoid as many complications as possible. The patient should be monitored by external methods such as ultrasound or phonocardiogram and by a fetal stethoscope.¹³ This is especially important if a bloody tap is encountered. The blood or bloody fluid should be evaluated immediately by Fetaldex®, Kleihauer-Bettke, or alkaline denaturation test for fetal blood since if it is present, fetal anemia or exsanguination may result.¹³

Following cord injury there is a change in fetal heart rate that is unrelated to the amount of blood loss. This fetal bradycardia is thought to be a neural reflex, which by monitor shows as a variable-type deceleration.¹⁷⁻¹⁹

Acknowledgment:

The authors wish to thank Paul D. Bruns, M.D., for his review and suggestions.

REFERENCES

1. Young PE, Matson MR, Jones OW: Amniocentesis for antenatal diagnosis. *Am J Obstet Gynecol* 125:495, 1976.
2. Gordon HR, Deukmedjian AG: Suprapubic vs. periumbilical amniocentesis. *Am J Obstet Gynecol* 122:287, 1975.

(Continued on page 186)

Solitary (Localized) Pleural Mesothelioma: A Case Report With Brief Review of the Literature

ANH H. DAO, M.D. and SONG W. WONG, M.D.

In contrast to the diffuse mesothelioma which is always malignant and often related to asbestos exposure,¹ the localized or solitary pleural mesothelioma is usually benign, with no history of association with asbestos.² These benign, mostly fibrous tumors which comprise approximately 25% of all mesotheliomas³ are quite rare, with an incidence of 2.8 cases per 100,000 registrations at the Mayo Clinic.⁴ They often present as pedunculated lesions arising from the visceral pleura, projecting into the pleural cavities or, in a small number of cases, as an entirely intrapulmonary mass.⁵

We report a case of solitary pleural mesothelioma of mixed fibrous and epithelial type, presenting as a slow growing mediastinal mass.

Case Report

The patient, a 50-year-old, white woman, was admitted for the fifth time on April 2, 1979 for evaluation of a mediastinal mass. A chronic smoker of two to three packs per day with numerous episodes of bronchitis, she was first noticed in 1972 to have a right hilar mass measuring approximately 2 cm in size. A complete evaluation of the mass was carried out, including normal bronchoscopy, negative cytology, three negative cultures for acid-fast organisms and fungi, and negative right supraclavicular lymph node biopsy. Bone marrow study, IVP, upper GI series, barium enema, and gallbladder series were all within normal limits. IPPD and histoplasmin skin tests were negative.

The patient was followed in the clinic for the next five years for a slowly expanding right suprahilar mass which, in 1978, was 3 to 4 cm in diameter. Besides a few bouts of right middle lobe pneumonia, which cleared on antibiotics, the patient was doing well, with no weight loss, hemoptysis, or pleurisy. She had never worked in an industrial plant. Mediastinoscopy with lymph node biopsy in 1978 revealed noncaseating granulomatous inflammation, negative for acid-fast organisms and fungi. Physical examination in 1979 was essentially normal. PA and lateral chest x-rays (Fig. 1) revealed a bilobular mass in the upper mediastinum projecting

over the right heart border. There was some interval growth relative to the previous examination in 1978. White blood count was 4,100/cu mm, hemoglobin 12.5 mg/dl. Urine was clear and contained no sugar or albumin.

A thoracotomy was carried out on April 3, 1979 revealing a bilobed, well-circumscribed mass within the posterior mediastinum. It surrounded the middle lobe bronchus, with its posterior margin adjacent to the azygos vein. Blunt dissection revealed no connections to the bronchi or pleura. Gross examination of the mass after removal revealed a bilobed, well-encapsulated lesion with a smooth, pink-white surface. The lobes measured approximately 6 and 7 cm in maximum diameter respectively, with a combined weight of 170 gm. Sectioning revealed a firm, rubbery, pink-white tissue with pseudolobulation of the cut surface, which bulged slightly (Fig. 2). Several small, irregular foci of cystic changes and



Figure 1. PA chest x-ray showing an upper mediastinal mass projecting over the right heart border.

From the Department of Pathology, Vanderbilt University School of Medicine and Metropolitan Nashville General Hospital, Nashville.

Reprint requests to Department of Pathology, Metropolitan Nashville General Hospital, 72 Hermitage Ave., Nashville, TN 37210 (Dr. Dao).

papillary formations were also noted. Microscopically, the lesion was predominantly fibrous with abundant collagen bundles. Within the fibrous stroma there were numerous irregular cleft-like spaces lined by a layer of cuboidal epithelial cells (Fig. 3). Papillary epithelial structures were present in several areas. In others, the epithelial lining was several layers thick and masses of alveolar-like cells were seen collected within the cleft lumina. At the periphery, a definite tubular appearance was noted, with duct-like structures possessing a thick fibrous wall surrounding a central round, epithelium-lined lumen. The epithelial cells were quite regular and no nuclear atypism was found. The patient did well postoperatively, and was followed in the clinic with no apparent ill effects.

Discussion

On review of the literature, the patients' ages ranged from 5 to 87 in one study⁵ to 34 to 73 in another.⁶ Peak incidence occurred in the fourth to the sixth decades. There was a slight preponderance in men.

More than half of the cases, especially those with small lesions, presented as an asymptomatic mass discovered in a chest x-ray taken for unrelated reasons.⁵ Many of these tumors were observed for years before excision, the longest observation time being 20 years.⁶ In our case, that time interval was seven years, during which the tumor had tripled in size. Symptoms and signs, when they existed, could be classified as intrathoracic, such as atelectasis, pneumonitis, pleural effusions, vena cava compression syndrome; and extrathoracic, such as dyspnea, chills, fever, and osteoarthropathic manifestations. Our patient did have bouts of bronchitis and pneumonia, which in part could be related to her smoking habits. One interesting manifestation, namely hypoglycemia, was observed by Dalton⁵ in three of his patients.



Figure 2. Gross appearance of the bisected, smooth, well-encapsulated tumor showing slightly bulging cut surface with pseudolobulation.

Radiologic features of solitary mesotheliomas were not pathognomonic.⁷ Most were described as solitary, circumscribed, homogeneous masses.

The largest series with records of the anatomic location was that of Dalton⁵ with 40 cases, in which 45% of the tumors were pedunculated and lay entirely in the pleural cavity, either right or left. Almost all were attached to the visceral pleura. Twenty percent were mediastinal with projections into the pleural cavity and 7.5% were entirely intrapulmonary but showed a point of contact with the overlying pleura. The lesion in our patient was located primarily in the mediastinum, with projection into the right pleural cavity over the right heart border.

Even though solitary pleural mesotheliomas are slow growing tumors, they can attain enormous size. Dalton⁵ recorded a tumor which measured 25 cm in width and weighed 4,500 gm. The smallest tumor noted was 2.5 cm in size and weighed 4 gm.

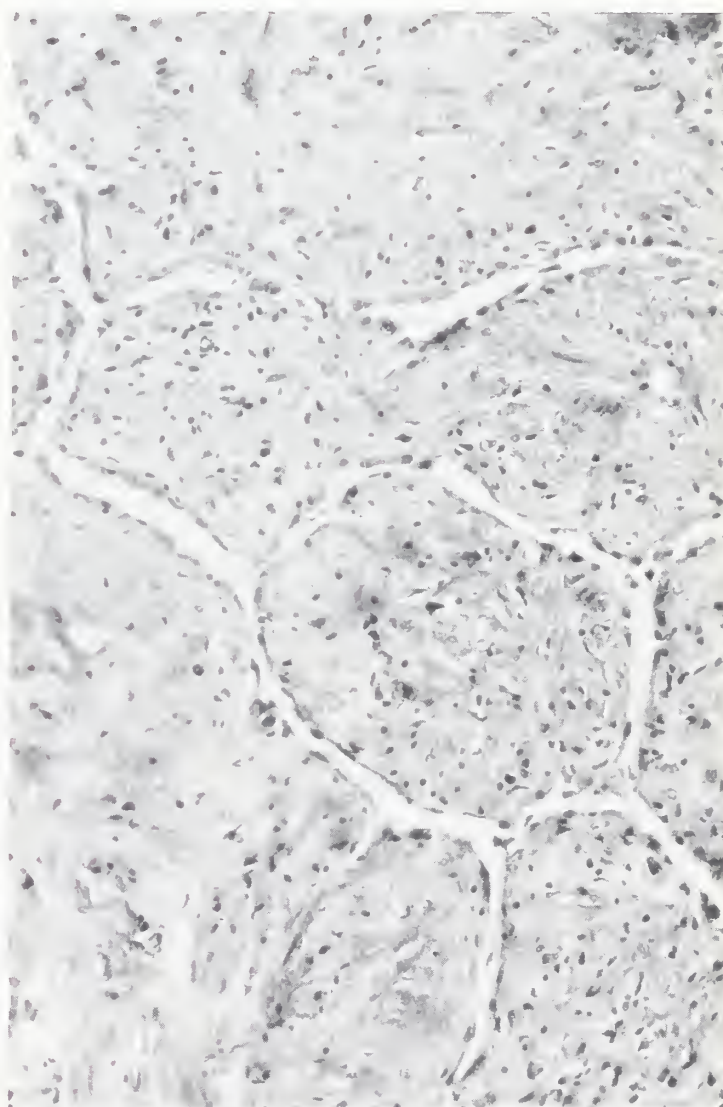


Figure 3. Microscopic appearance of the tumor with epithelium-lined cleft-like spaces lying in an abundant fibrous stroma (hematoxylin-eosin, X400).

As far as gross appearance was concerned, the tumors were generally round, with a smooth pleural surface which could be bosselated and streaked with blood vessels. Cut surface usually showed a whorled pattern with tiny areas of hemorrhage and occasional cystic spaces. In our case, the tumor was bilobed with a well-encapsulated surface. Some nerve-like bundles were found attached to the superior pole so that a gross diagnosis of neurilemmoma was proposed.

Microscopic appearance of the tumors was quite varied. Several patterns of growth were noted, and many of the tumors exhibited a mixture of two or more of these patterns. Most of the tumors contained abundant fibrous tissue which could either be predominantly collagenous, with few cells, or very cellular, with bundles of fibroblasts arranged in a storiform pattern. Areas with a hemangiocytoma-like appearance were also seen.⁵ In some tumors⁸ there was either a papillary or tubular appearance which was more prominent near the surface. Calcific spherules were found in a few lesions. The tumor in our case showed a predominantly fibrous pattern, with numerous cleft-like spaces and tubular structures lined by low cuboidal cells. This growth pattern was not frequently found in any of the series reported.

The origin of these tumors remains controversial. Klemperer in 1931⁹ believed that they arose from the subpleural connective tissue. Stout and Murray¹⁰ demonstrated in 1942 that cells from a solitary fibrous pleural tumor grew like mesothe-

lial cells in tissue culture and suggested a mesothelial origin for these tumors. This theory gained wide acceptance for the next two decades. Recent light and electron microscopic studies,^{11, 12} however, failed to reveal mesothelial features in the tumor cells.

There is no evidence of association between asbestos exposure and the appearance of solitary fibrous tumors of the pleura, a fact noted by several studies reviewed.

Surgical removal is the treatment of choice. The recurrence rate in large series varied from 1/18⁸ to 4/24.¹³ Most of the recurrences were at the site of resection. Tumors with a broad base of attachment to the pleural surface and those located primarily in the pulmonary parenchyma required a more liberal excision.

REFERENCES

1. Churg J, Rosen SH, Moolten S: Histological characteristics of mesothelioma associated with asbestos. *Ann NY Acad Sci* 132:614-622, 1965.
2. Shabanah FH, Sayegh SF: Solitary (localized) pleural mesothelioma. *Chest* 60:558-563, 1971.
3. Legha SS, Muggia FM: Pleural mesothelioma: clinical features and therapeutic implications. *Ann Intern Med* 87:613-621, 1977.
4. Okike N, Bernatz PE, Woolner LB: Localized mesothelioma of the pleura. *J Thorac Cardiovasc Surg* 75:363-372, 1978.
5. Dalton WT, Zolliker AS, McCaughey WTE, et al: Localized primary tumors of the pleura: an analysis of 40 cases. *Cancer* 44:1465-1475, 1979.
6. Scharifker D, Kaneko M: Localized fibrous mesothelioma of pleura: a clinicopathologic study of 18 cases. *Cancer* 43:627-635, 1979.
7. Rafter ER, Pool JL, Melamed MR: Pleural mesotheliomas. *Am J Roentgenol* 99:863-880, 1966.
8. Foster EA, Ackerman LV: Localized mesotheliomas of the pleura: pathologic evaluation of 18 cases. *Am J Clin Pathol* 34:349-364, 1960.
9. Klemperer P, Rabin CB: Primary neoplasms of the pleura: a report of 5 cases. *Arch Pathol* 11:386-411, 1931.
10. Stout AP, Murray MR: Localized pleural mesothelioma. *Arch Pathol* 34:951-964, 1942.
11. Hernandez FJ, Fernandez BB: Localized fibrous tumors of pleura: a light and electron microscopic study. *Cancer* 34:1667-1674, 1974.
12. Kawai T, Mikata A, Torikata C, et al: Solitary pleural mesothelioma: a light and electron microscopic study. *Am J Surg Pathol* 2:365-374, 1978.
13. Claggett OT, McDonald JR, Schmidt HW: Localized fibrous mesothelioma of the pleura. *J Thorac Surg* 24:213-230, 1952.

Umbilical Vessel Trauma . . .

(Continued from page 183)

3. Wang MYFW, McCutcheon E, Desforbes JF: Fetomaternal hemorrhage from diagnostic transabdominal amniocentesis. *Am J Obstet Gynecol* 97:1123, 1967.
4. Grove DO, Trombetta GC, Amstey MS: Fetal complications of amniocentesis. *Am J Obstet Gynecol* 115:1154, 1973.
5. Berner HW, Seisler EP, Barlow J: Fetal cardiac tamponade: A complication of amniocentesis. *Obstet Gynecol* 40:599, 1972.
6. Hyman CJ, Depp R, Pakravan P, et al: Pneumothorax complicating amniocentesis. *Obstet Gynecol* 41:43, 1973.
7. Misenhimer HR: Fetal hemorrhage associated with amniocentesis. *Am J Obstet Gynecol* 94:1133, 1966.
8. Rehder H, Weitzel H: Intrauterine amputations after amniocentesis. *Lancet* i(8060): 382, 1978.
9. Kerenyi TD, Walker B: The preventability of "bloody taps" in second trimester amniocentesis by ultrasound scanning. *Obstet Gynecol* 50:61, 1977.
10. Nelson LH, Goodman HO, Brown SH: Ultrasonography preceding diagnostic amniocentesis and its effect on amniotic fluid cell growth. *Obstet Gynecol* 50:65, 1977.
11. Platt LD, Manning FA, Lemay M: Real-time B-scan directed amniocen-

- tesis. *Am J Obstet Gynecol* 130:700, 1978.
12. Harrison R, Campbell S, Craft I: Risks of fetomaternal hemorrhage resulting from amniocentesis with and without ultrasound placental localization. *Obstet Gynecol* 46:389, 1975.
13. Gassner CB, Paul RH: Laceration of umbilical cord vessels secondary to amniocentesis. *Obstet Gynecol* 48:627, 1976.
14. Karp LE, Hayden PW: Fetal puncture during midtrimester amniocentesis. *Obstet Gynecol* 49:115, 1977.
15. Bowman JW, Pollock JM: Amniotic fluid spectrophotometry and early delivery in the management of erythroblastosis fetalis. *Pediatrics* 35:815, 1965.
16. Curtis JD, Cohen WN, Richerson HB, et al: The importance of placental localization preceding amniocentesis. *Obstet Gynecol* 40:194, 1972.
17. Goodlin RC, Lowe EW: A functional umbilical cord occlusion heart rate pattern. *Obstet Gynecol* 43:22, 1974.
18. Lee ST, Hon EH: Fetal hemodynamic response to umbilical cord compression. *Obstet Gynecol* 22:553, 1963.
19. Goldkrand JW, Speichinger JP: "Mixed cord compression," fetal heart rate pattern, and its relation to abnormal cord position. *Am J Obstet Gynecol* 122:144, 1975.

Calcium Channel Blockers: Verapamil and Nifedipine

FRED L. HALEY, M.D.

With the current explosion of information appearing in the cardiovascular and internal medicine literature on the calcium (Ca^{++}) blockers, a new class of drugs currently being released for clinical use, it seems appropriate to review the salient features of two Ca^{++} channel blockers which are likely to be released for clinical oral use during calendar year 1982, namely verapamil and nifedipine.

Mechanism of Action of Ca^{++} Antagonists

On a cellular level, there are two inward currents that are necessary for the depolarization of cardiac cell membranes. A brief opening of fast sodium channels is responsible for the initial spike in the action potential, and a subsequent opening of slow channels contributes to its plateau. The flow of current through the slow channel is carried by Ca^{++} ions.¹ Consequently, although contraction can be initiated without extracellular Ca^{++} , myocardial cells are dependent upon influx of extracellular Ca^{++} for maintenance of contraction. This influx of Ca^{++} ions is linked to mechanical activity and recorded as tension development. Ca^{++} channel blocking agents affect movement of Ca^{++} across the phospholipid membrane and result in reduced tension. Influx of Ca^{++} through these slow channels is similarly responsible for the development and maintenance of tone in coronary and peripheral vascular smooth muscles. Not only does Ca^{++} influx during the plateau of the intracellular action potential play an essential role in coupling excitation to contraction, but the automaticity of the sino-atrial and atrioventricu-

lar (AV) nodes, along with the velocity of conduction, rhythmicity, and excitability of Purkinje fibers are all influenced by intracellular Ca^{++} concentration.²

The various Ca^{++} channel blocking agents can be used in the treatment of a wide variety of cardiovascular disorders, including reentrant paroxysmal supraventricular tachycardia, atrial flutter and fibrillation, chronic stable angina pectoris, unstable angina, Prinzmetal variant angina resulting from coronary vasospasm, arterial hypertension, hypertrophic obstructive cardiomyopathy, and for afterload reduction in the treatment of heart failure.² The rationale for the use of Ca^{++} channel antagonists in coronary artery disease itself revolves around their ability to cause coronary artery and arteriolar dilatation, inhibition of coronary constriction and platelet aggregation, reduction of myocardial oxygen demand through systemic arteriolar dilatation, and increase in oxygen delivery from the aforementioned coronary artery dilatation and platelet desegregation.³

Verapamil

The onset of action of verapamil after oral administration ranges from 15 to 30 minutes; the drug has its peak effect after four to five hours, is excreted 70% through the kidneys, and is useful in a dose of 80 to 160 mg orally given three to four times daily, or in a dose of 150 $\mu\text{g}/\text{kg}$ given intravenously.³ Verapamil prolongs AV conduction (AH interval) in a dose dependent manner and is the intravenous drug of choice for the treatment of reentrant supraventricular arrhythmias.¹ Because of its tendency to produce AV block, verapamil should be used with cau-

Reprint requests to 1325 Carter's Creek Pike, Franklin, TN 37064 (Dr. Haley).

tion in patients in whom AV block is apt to develop (those taking digitalis glycosides or those with a possible bradycardia-tachycardia syndrome) and should probably not be administered for at least 48 hours following the discontinuation of β -adrenergic blocking agents.¹ It has a somewhat greater propensity than nifedipine for worsening or precipitating heart failure³; however, this may not necessarily be a clinically significant effect in those individuals not having congestive heart failure prior to treatment with verapamil.⁴ As a result of its previously mentioned tendency to increase the AH interval, verapamil may also be used to slow the ventricular response rate in the treatment of atrial fibrillation or flutter.

Verapamil has also been shown effective in the treatment of chronic stable angina pectoris (in a dose of 360 mg daily) as regards an increase in exercise tolerance and reduction in consumption of nitroglycerin.^{5,6} Verapamil has been demonstrated to be effective in the long-term therapy of patients with hypertrophic cardiomyopathy as evidenced by sustained symptomatic improvement and an increase in exercise tolerance; however, close monitoring for adverse hemodynamic or electrophysiologic effects is required.⁷ As far as side effects are concerned, verapamil may cause dizziness, headaches, hypotension and/or postural syncope, but this is not so pronounced as may occur with nifedipine. Constipation may occur as often as 10% of the time.³

Nifedipine

Nifedipine is a potent long-acting vasodilator that has its onset of action 15 to 30 minutes after oral administration, has its peak effect in one to two hours, is excreted predominantly via the kidneys, and is useful in doses ranging from 10 to 40 mg given three to four times per day. Nifedipine causes considerably greater reduction in both coronary and systemic vascular resistance than does verapamil and it has essentially no depressant effects on either impulse formation or AV conduction in vivo, although most patients taking nifedipine have a reflex-mediated increase in heart rate. As regards left ventricular function, nifedipine regularly increases cardiac output, lowers the left ventricular and diastolic pressure, and may favorably shift the left ventricular diastolic pressure-volume relationships, particularly in patients with cardiomyopathy or myocardial

ischemia.³ The lack of tendency of nifedipine to precipitate AV block permits its safe combination with digoxin, and it may be administered to patients with potential conduction system disturbances (bradycardia-tachycardia syndrome). Nifedipine augments coronary blood flow in human beings, thereby increasing myocardial perfusion, and it may be safely combined with a β -adrenergic receptor blocking agent.

While nifedipine appears to be more effective than verapamil for relief of coronary vasospasm, it appears to be less effective for the treatment of anginal syndromes not attributable to coronary spasm; on the other hand, therapy with nifedipine plus a β -blocker yields better results than either nifedipine or β -receptor blockade alone.¹ This appears to be true for unstable angina pectoris as well.⁸

Nifedipine has been shown to promptly lower the arterial pressure in patients with hypertensive crisis and in severe essential hypertension; in patients with coronary disease and left ventricular failure it has been found to improve exercise tolerance and to reduce pulmonary capillary wedge pressure; and in animal studies, nifedipine appears to be useful for reduction of myocardial infarct size and for myocardial preservation in cardiopulmonary hypothermic bypass.¹ As regards the production of side effects, nifedipine is somewhat more prone than verapamil to result in dizziness, headaches, hypotension and/or postural syncope; however, it is not generally associated with AV block or heart failure and is less likely to result in constipation.

REFERENCES

1. Henry PD: Comparative pharmacology of calcium antagonists: Nifedipine, verapamil and diltiazem. *Am J Cardiol* 46:1047-1058, 1980.
2. Braunwald E: Introduction: Calcium channel blockers. *Am J Cardiol* 46:1045-1046, 1980.
3. Pepine CJ, Conti CR: Calcium blockers in coronary heart disease. *Mod Concepts Cardiovasc Dis* 50:61-66, 1981.
4. Ferlinz J, Easthope JL, Aronow WS: Effects of verapamil on myocardial performance and coronary disease. *Circulation* 59:313-319, 1979.
5. Subramanian B, Bowles M, Lahiri A, et al: Long-term antianginal action of verapamil assessed with quantitated serial treadmill stress testing. *Am J Cardiol* 48:529-535, 1981.
6. Hecht HS, Chew CYC, Burnam MH, et al: Verapamil in chronic stable angina: Amelioration of pacing-induced abnormalities in left ventricular ejection fraction, regional wall motion, lactate metabolism and hemodynamics. *Am J Cardiol* 48:536-544, 1981.
7. Rosing DR, Condit JR, Maron BJ, et al: Verapamil therapy: A new approach to the pharmacologic treatment of hypertrophic cardiomyopathy: III. Effects of long-term administration. *Am J Cardiol* 48:545-553, 1981.
8. Hugenoltz PG, Michels HR, Serruys PW, et al: Nifedipine in the treatment of unstable angina, coronary spasm and myocardial ischemia. *Am J Cardiol* 47:163-173, 1981.

Organ Donor Recruitment

A previous report of the Council on Scientific Affairs, Report D (I-80), dealt with the shortage of donor organs for transplantation procedures in patients with end stages of kidney and heart disease. In preparation for that report, the Council considered briefly those steps that might improve organ donor recruitment, including resorting to the presumption of consent of the prospective donor by the constituted authority in the absence of an objection by the decedent or his nearest of kin. Since this was a new departure for the AMA and a debatable issue, it was decided to address the question of donor recruitment in a separate report.

Need for Organ Donors

The quality of life of patients with end-stage renal disease on hemodialysis has improved steadily in recent years and the incidence of renal transplantation procedures has been constant. The latter has been both because the quality of life after transplantation remains imperfect and donor organs are in short supply. Nevertheless, renal transplantation frees the patient from his dialysis apparatus and is less costly than chronic hemodialysis; the extra cost of surgery is offset by dialysis savings within 18 months after transplantation. It is likely that new improvements in the control of the rejection phenomenon over the next few years will further enhance the desirability of this option for at least half of those approximately 50,000 Americans now on chronic hemodialysis.

The imminent acceptance of cardiac transplantation as a reimbursable procedure will further increase the demand for brain death donors. The major limiting factor in the number of renal transplants now done (about 3,000 in 1979) and the principal deterrent to more widespread progress in cardiac transplantation has been the shortage of organs. Each transplant program in the country has a long list of end-stage renal disease patients awaiting a suitable kidney. In order to address these problems until truly acceptable artificial organs can be manufactured, it becomes imperative to make available from acceptable donors a larger supply of organs.

Organs removed from a cadaver after breathing and heart action have ceased have sustained serious

ischemic injury and, except for cornea, bone and skin, are rarely suitable for transplantation. Death from brain injury, tumor or infarct may permit hours or days of normal circulation, especially if controlled mechanical ventilation is maintained, that will allow preservation of heart and kidney until they can be removed, cooled and properly preserved for transplantation. There are more than enough such deaths in the United States (estimate 20,000) to provide a surfeit of organs, if there were a satisfactory method of bringing all such cadavers into the pool of donors. Now that there is a cadaver graft survival of transplanted hearts or kidneys of 50% to 70% and kidney host survival of up to 90% for two years, it has become important that our society find ways to improve donor recruitment.

Donor Recruitment

The Uniform Anatomical Gift Act has been adopted by all 50 states and allows the donor's wishes to be binding after his death. The legal instrument is the wallet-sized donor card, which has been made available through many organizations, including the American Medical Association, and which has been placed on the back of vehicle drivers' licenses in 17 states. In 1968, a Gallup Poll indicated that 70% of Americans were willing to donate organs for transplantation at the time of their death. A subsequent poll of physicians in 1969 suggested that more than 70% supported the concept of routine organ salvage from cadavers. In contrast to these poll findings, a recent survey in the state of Maryland, where the donor card is on the driver's license, found that only 1.5% elected to sign the donor contract.

Unless there has been a signed donor card of which the family is actively aware, obtaining family consent may be difficult—even in an altruistic society. The physician's failure to save the patient, his fancied exposure to legal liability, the family's grief, the often acute nature of brain injury, and any complexity in obtaining the cooperation of a transplant team all militate against considering the brain death patient as a potential donor. This may be true, even though the individual may have been generous and thoughtful enough to sign the consent form on his vehicle driver's license. It is a rare physician who will overcome these considerations and initiate a discussion with the family to request its consent in the absence of a donor card. It is reasonable to hope that this will change as the population harboring successfully transplanted organs increases and contributes to a promotion of the concept. However, something more needs to be done if a

This is Council on Scientific Affairs Report D. Past House Action: I-80:196-200.

Reproduced with permission from *JAMA* (246:2157-2158, Nov. 13, 1981). Copyright 1981, American Medical Association.

meaningful increase in donors is to be seen in the near future.

Presumed Consent

It has been suggested that donor recruitment might be enhanced by providing for routine salvage of cadaver organs except when there has been prior objection by the decedent or current objection by the nearest of kin. There was an earlier suggestion that a carefully drawn statute could be made acceptable to a majority of people in the United States and refer to the experience in other countries.¹ However, the experience needs to be carefully assessed.

A questionnaire mailed to renal transplant programs in 40 countries brought responses from 28. Thirteen countries used presumed consent as a basis for removing organs for transplantation, although seven employed donor cards along with presumed consent. Thirteen other countries required a donor card or family consent, but permitted a hospital official or coroner to give consent in the absence of a donor card when the nearest of kin could not be found. The European Committee on Legal Cooperation of the Council of Europe has favored presumed consent and European countries are expected to move further in this direction. However, it is by no means certain that national acceptance of this presumption would correct the organ shortage.

Even those nations with presumed consent statutes have not dramatically reduced their need for organs: all still have continuing waiting lists for renal transplantation. It may be relevant to note that most English-speaking countries do not have such statutes. Even when consent may be presumed, or at least freely given, several hurdles to efficient donor recruitment remain.

One additional program which might encourage more people, if not the full 70% who agree to the idea in the abstract, to sign an organ donor card would be a requirement that every adult under 65 respond to the donor card provision on his vehicle license by either accepting or rejecting that responsibility.

While presumed consent laws might promote public awareness and enhance the likelihood of organ salvage after a prospective donor has been identified, they do nothing to aid physicians and nurses in that identification. Currently, most organ retrieval is limited to those hospitals with active transplant programs where there exists a high level of awareness to the need and ready access to an organ recovery team. The recruitment of donors in hospitals remote from such centers has been difficult whether consent is direct or presumed.

Hospital Surveillance System

A group of physicians at the Center for Disease Control that has studied cadaver donor problems has concentrated upon one method for encouraging greater recruitment of brain death patients for cadaver donors.² They organized a recruitment network that related the transplant team to certain hospital areas, such as the intensive care unit and the emergency room, through a transplant nurse coordinator who

served as an interface between the attending staff of the hospital and the organ recovery team. This individual alerted the attending physician to the possibility and, only after he had declared the patient dead and given his permission, discussed the prospect of organ donation with the family. In the event that consent was given, the transplant team was contacted and arrangements for organ salvage made by the coordinator.

Beginning in 1976, 34 Georgia hospitals instituted such active donor-surveillance procedures for a total of 900 hospital-months of effort in collaboration with the two transplant programs in the state. Criteria for donor selection was established at each hospital. These included the donor's age, the circumstances of death, the absence of infection, the absence of malignancy, the general health prior to admission and the renal status. Each hospital was studied to determine which service units were likely to yield the most potential donors. Specific system programs were established in each hospital for professional education, active surveillance by a transplant coordinator, continuous medical record surveillance and evaluation of the organ retrieval process efficiency. It was estimated that one nurse or physician's assistant could serve as transplant coordinator for five to eight hospitals or 3,000 to 5,000 deaths in a year.

In a preparative phase of chart review for the 37 hospitals of Georgia, it was found that 229 potential donors could be identified out of 12,531 deaths or 1.8/100 in-hospital deaths. A potential donor was generally a white male between 5 and 55 years of age who died of CNS trauma, hemorrhage or tumor in a critical care unit within three days of admission to an acute-care hospital that had more than 350 deaths per year. Only ten kidneys were retrieved in this year.

During the two and one-half year study period, 555 potential donors were identified among 23,846 deaths. Of these, 82 or 15% became actual donors. During each of the last two years of the prospective effort 88 and 90 kidneys, respectively, were obtained. Thus, through this mechanism the yield of actual donors was enhanced about nine-fold. Perhaps more important is the fact that an ongoing analysis of factors involved in organ donation at 34 hospitals in Georgia is continuing and may hope to provide further increments in success at retrieving acceptable organs.

This Georgia effort suggests that this plan, which can be used by any group of motivated physicians, is capable of substantially increasing the recruitment of organ donors. It has worked in other locations where active transplant teams have attempted similar organization of the effort. However, the Georgia program has dramatically documented just how much greater success can be achieved.

Conclusion

It is apparent that the number of donors contributing to transplant surgery, especially in the areas of cardiac and renal transplantation, needs to be greatly increased, if transplant surgery is to realize its full potential. This issue will become even more critical

(Continued on page 201)

Drug Abuse Related to Prescribing Practices

Prescription drug abuse can take several forms:

1. The willful and conscious misprescribing of controlled substances by physicians for drug abuse purposes, and usually for profit. These are the "script doctors." This type of prescribing is done by physicians who are culpable and who should be prosecuted to the full extent of the law.

2. Inappropriate prescribing by physicians who unwittingly acquiesce to insistent demands by patients for medication. These are the "duped doctors." Typically, in these cases, drugs are prescribed in excessive amounts or for longer periods than necessary. The result can be the initiation or perpetuation of drug abuse or drug dependence in the patient, or diversion of the drug to other persons for abuse purposes.

3. Uninformed prescribing by physicians who have not kept abreast of new developments in pharmacology and drug therapy. These are the "dated doctors." In addition to excessive amounts and time periods, drugs can be prescribed for conditions that do not warrant chemotherapy or that might better be treated by other drugs.

4. Self-prescribing and administration by physicians who themselves are drug abusers or are drug dependent. These are "impaired doctors" who are in need of treatment and who may have to have their licenses to practice restricted or suspended. Rehabilitation and disciplinary programs already exist in most states through medical societies and boards of medical examiners.

Additionally, concomitants to the prescribing of controlled substances that are related to drug abuse include prescription "kiting," thefts and forgeries, and thefts of drugs from manufacturers, wholesalers, pharmacies, and physicians' offices.

While all of the foregoing constitute an appreciable problem, it must be recognized that drug abuse as a whole represents a much greater and more complex issue for society. On the "supply" side, smuggling of drugs into the United States from other countries and the clandestine manufacture of drugs are important sources of otherwise licit drugs, and practically the only sources of illicit drugs, that find their way into the streets. On the "demand" side are an array of interrelated physiological, psychological and sociological variables that motivate and perpetuate drug abuse and dependence. Drug abuse would remain a major concern even if that segment of the problem identified as prescription drug abuse were to be largely solved.

This is Council on Scientific Affairs Report C. Past House Action: A-80:219.

Reproduced with permission from *JAMA* (247:864, Feb 12, 1982). Copyright 1982, American Medical Association.

Recommendations

The following actions are recommended for implementation by state medical societies:

1. Institution of a comprehensive statewide program to curtail prescription drug abuse and to promote appropriate prescribing practices, a program that reflects drug abuse problems current within the state, and takes into account the fact that practices, laws and regulations differ from state to state. The program should incorporate these elements: (a) Determination of the nature and extent of the prescription drug abuse problem. (b) Cooperative relationships with law enforcement, regulatory agencies, pharmacists and other professional groups to identify "script doctors" and bring them to justice, and to prevent forgeries, thefts and other unlawful activities related to prescription drugs. (c) Cooperative relationships with such bodies to provide education to "duped doctors" and "dated doctors" so their prescribing practices can be improved in the future. (d) Educational materials on appropriate prescribing of controlled substances for all physicians and for medical students.

2. Placement of the prescription drug abuse program within the context of other drug abuse control efforts by law enforcement, regulating agencies and the health professions, in recognition of the fact that even optimal prescribing practices will not eliminate the availability of drugs for abuse purposes, nor appreciably affect the root causes of drug abuse. State medical societies should, in this regard, emphasize in particular: (a) Education of patients and the public on the appropriate medical uses of controlled drugs, and the deleterious effects of the abuse of these substances. (b) Instruction and consultation to practicing physicians on the treatment of drug abuse and drug dependence in its various forms.

Appropriate units of the AMA should assist state medical societies in accomplishing these objectives, through the following activities: (1) Continued liaison with relevant national organizations, including federal agencies such as DEA, FDA and NIDA, and voluntary associations, such as PMA and APhA. (2) Provision of basic material on prescribing practices, including material already published. (3) Dissemination of descriptions of model programs reflecting cooperative arrangements that already exist in certain states. (4) Development of guidelines for office diagnosis, treatment and referral of drug dependent patients.

Explication of Recommendations

Determination of Problems

Several methods can be used to find out which drugs are being most frequently abused and diverted

on the retail level, and which prescribers are either wantonly or unwittingly contributing to the bulk of the diversion problem. Enforcement officers can ascertain these facts. Stories in the press, although often sensationalized, can provide leads. Also of help can be data compiled by state information systems, such as the triplicate prescription record system, and by federal systems, such as the Drug Abuse Warning Network (DAWN) and the Automated Reports and Consolidated Orders System (ARCOS).

It should be pointed out that such systems often are limited in their coverage and in their reporting capability. For example, DAWN data are gathered only from hospital emergency rooms and medical examiners and therefore do not reflect drug abuse unrelated to serious medical problems. Moreover, the reliability of the data depends a great deal on whether urine or blood tests are performed to verify the drug or drugs that supposedly were taken. Triplicate prescriptions pertain only to Schedule II drugs, and this system is operative in only a few of the states; questions also have been raised about its cost effectiveness. ARCOS is confined to Schedule II drugs and narcotic-containing drugs in Schedules III and IV, and their movement from manufacturer or wholesaler to pharmacies and dispensing physicians. All systems have inevitable time lags between information gathering and reporting, which can be misleading in a fast-changing area such as drug abuse. Nevertheless, these systems should be utilized whenever possible, recognizing and taking into account their deficiencies.

Difficult though it may be, it is important to identify the various sources of supply of drugs that are causing an abuse problem. It cannot be assumed that because an abused drug is one that is utilized in medical practice it is only being diverted by or from practitioners and pharmacies. For example, a large proportion, if not most, of the upswing in street abuse of methaqualone noted by DAWN in 1979 and early 1980 in many areas of the country was probably attributable to supplies that were counterfeited in South America and smuggled into the United States. That is not to say that prescribing and retail diversion were not factors. It is to say that if the physician and the pharmacist are singled out to the exclusion of other possible sources, then overall abuse of a drug may well continue despite these measures.

Cooperative Activities To Combat Wanton Diversion

The medical society, the pharmacists' association, state enforcement personnel, the regional DEA office, the single state drug abuse agency—these and other concerned statewide organizations should develop a feasible plan of cooperative activities, consonant with the nature and scope of willful diversion of prescription drugs within their state. These activities might include the following:

1. A 48-hour delay in the filling of prescriptions for certain drugs by pharmacists, so that stocks of these drugs need not be kept in the pharmacy. This practice can deter burglaries and thefts. The advantages of such delay, however, must be weighed against adverse implications for the health and well-being of patients. This may not be true with other substances, especially if adequate substitutes are not available.

2. Verification of prescription of certain drugs (those found to be most subject to abuse and diversion in the state) through a phone call by the pharmacist to the prescribing physician. This practice not only can detect forgeries, but it can also reduce their incidence if it is well publicized.

3. Encouragement of physicians to safeguard their prescription blanks and to avoid pre-printing their DEA number on them.

4. Encouragement of physicians to assist enforcement officers in every possible way in the identification, investigation and prosecution of "script doctors."

5. Exploration of possible legislative and regulatory changes that could aid enforcement and more effectively curb blatant misprescribers. Increased funding and personnel for enforcement agencies might be one desirable objective. In assessing the merits of proposals, the likely impact of changes on the legitimate practice of medicine must always be a major consideration.

The above measures are directed to willful abuse and diversion, an area that typically involves an insignificant number of physicians even though an appreciable quantity of drugs. It would be a mistake to overload the enforcement system by taking punitive approaches to physicians who *unwittingly* misprescribe. Although also a minority of physicians, they are more numerous than "script doctors." Limited enforcement resources should not be diluted by "overkill." For such physicians, educational measures can be more effective and appropriate. In fact, vigorous and well-publicized prosecution of "script doctors" can itself be an educational "eye-opener" for other misprescribers.

Educational Approaches To The Unwitting Misprescriber

State medical associations, both unilaterally and cooperatively with other organizations, can take several approaches to upgrade prescribing practices of physicians who succumb to patient pressures or who are dated in their prescribing knowledge.

State societies can:

1. Set up panels to interview and evaluate physicians who have been referred by enforcement agencies because of possible misprescribing.

2. Devise formal courses on prescribing controlled substances for physicians who have been found in violation of prescribing regulations. This has been done in California where the State Board of Medical Quality Assurance makes attendance at this type of course, conducted by the California Medical Association, a mandatory requirement of probation for such physicians.

3. Offer courses to enforcement and regulatory personnel on the medical aspects of appropriate prescribing, so that they can gain a greater appreciation of the importance of exceptional prescribing to the well-being of certain patients, and so that they can better differentiate between intentional and inadvertent misprescribing.

4. Help enforcement and regulatory agencies monitor physicians who have been approached or who have taken courses, to assure that their prescribing practices improve.

The underlying principle in such undertakings is that peer persuasion and professional concern can motivate learning and facilitate change in a constructive way.


Other Educational Opportunities

Although a small number of misprescribers are responsible for most prescription drug abuse, a greater number of physicians could improve their use of controlled substances in the treatment of patients.

Both the American Medical Association and state medical societies have already produced and disseminated much valuable information for the edification of physicians.

What remains to be done is to create additional opportunities for this information to be presented and to be discussed. In this regard: (1) Greater use can be made of professional journals and other scientific publications. (2) Scientific meetings can be utilized more

frequently for symposia and formal courses on this subject. (3) Medical schools and residency programs can be encouraged to devote more attention to prescribing problems, as well as to other aspects of substance abuse.

Finally, the public must not be overlooked. Through school curricula, through the media, through community organizations, unbiased authoritative information should be conveyed on the judicious use of psychoactive drugs for the treatment of medical conditions, and on the adverse health and social consequences that can stem from this abuse. Educators and communicators have the skills to present material in effective ways. Physicians and their professional societies are eminently qualified to develop, review and evaluate basic information. They should consider it their responsibility to do so, and to make such information on drug abuse available for transmittal to various segments of the population. 

Organ Donor Recruitment . . .

(Continued from page 198)

when cardiac transplantation becomes more generally reimbursable and greater control is gained over the rejection phenomenon: events that are both likely to occur in the near future. Continued efforts to inform the medical community and the general public about transplantation and the need for identification of potential donors must be pursued. In addition, society at large must recognize the importance of extending the voluntary gift act through a greater willingness to consider one's own death and the potential gift he may, thereby, make to the life of another. Social and ethical discussions to bring a greater awareness of this possibility should be pursued at all levels of society.

Until the possibility of organ donation becomes a routine consideration at every hospital death, the Council recommends that the AMA: (1) continue to urge the signing of donor cards by the enlightened citizens of the land; (2) continue to teach physicians

through continuing medical education courses and the lay public through health education programs about transplantation issues in general and the importance of organ donation in particular; (3) encourage state governments to attempt pilot studies on promotional efforts that stimulate each adult to respond "yes" or "no" to the option of signing a donor card; (4) encourage and lend moral support to the development of an active surveillance system based upon an organ donor coordinator as employed in the Georgia program.

REFERENCES

1. Stuart FP, Veith FJ, Crawford RE: Brain death laws and patterns of consent to remove organs for transplantation from cadavers in the United States and twenty-eight other countries. *Transplantation*, to be published.
2. Bart KJ, Macon EJ, Humphries AL, et al: Increasing the supply of cadaveric kidneys for transplantation. *N Engl J Med*, to be published.

Acupuncture

Introduction

The AMA position on acupuncture is based upon Substitute Resolution 55 (C-74), which states that since the practice of acupuncture in the United States is an experimental medical procedure, it should be performed in a research setting by a licensed physician or under the direct supervision and responsibility of a physician. The resolution called upon the AMA to urge its constituent societies to seek appropriate legislation and rules and regulations to confine the performance of acupuncture to research settings.

In response to Resolution 25 (I-80), the Council on Scientific Affairs has reviewed the AMA "position on acupuncture and its relationship to medical practice." In recent years there have been a few controlled studies on the clinical effectiveness of the procedure, however, the evidence does not warrant reversal of the earlier AMA position.

Acupuncture Technique

An Ad Hoc Committee on Acupuncture of the National Institutes of Health and the American Society of Anesthesiologists paid a three-week visit to the Republic of China in 1973.¹ Therapeutic use of acupuncture involves the positioning of needles at one or more of 365 points on the body surface located by the "the meridians" (which connect to important internal organs) and "stimulating the energy flow" in the body by their mechanical twirling. While this has been accepted practice in rural China for over 2,400 years, it is important to appreciate that there have been perhaps significant changes in this practice in the past 15 years, since the Cultural Revolution. There are now multiple methods of therapeutic acupuncture based upon four or five standard sizes of acupuncture needle, varying in length from 1 to 10 cm. There are several different schools of acupuncture that differ in their selections of acupuncture points. In some, the points selected are at or near the site of disease; others select points remote from the disease site according to a different rationale; while still others suggest that special points be selected on the basis of symptoms. In any case, the needle is inserted and advanced until a "take" is experienced by the patient, which is described as a feeling of tingling, distention, heaviness and numbness. Once the correct point has been identified and the needle inserted, manual stim-

ulation may be carried out for several minutes. In recent years electro-acupuncture, in which electric stimulation is applied, has gained widespread use because it is easier and allows a more uniform and more continuous stimulation. Some students consider this similar to transcutaneous electrical stimulation of segmental nerves.

Other forms of therapeutic acupuncture include the injection of sterile water, saline, procaine, morphine or vitamins into acupuncture points; the application of pressure for several minutes to the acupuncture point; and the application of burning floss (moxibustion) or a hot cup over the underlying acupuncture point. Thread acupuncture involves the insertion of a surgical needle threaded with catgut through one acupuncture point and out another. The catgut thread is left in place to produce stimulation for several weeks.

Although needle breakage has been known to occur and, since aseptic technique is not used, introduction of infection by a contaminated needle is an obvious possibility; there are, however, remarkably few serious complications.^{1,2} Perhaps the most dangerous aspect is likelihood that acupuncture may be used for symptomatic treatment of a condition that has not been properly diagnosed. In such instances, the patient may be prevented from seeking proper treatment and the undiagnosed disease may progress to an incurable stage.

Clinical Applications

In China, acupuncture therapy has been advocated and properly used for the treatment of virtually every disorder or disease in man and animals. Acupuncture has been used for anesthesia to control pain during major surgery as well as therapeutically to control chronic pain. The therapeutic use is generally performed by a traditional practitioner or a "barefoot" doctor, whereas the anesthesia application is generally provided by medical personnel with more advanced training. Oftentimes acupuncture is tried on the assumption that the symptom is due to a particular disease: subsidence of the symptom then confirms the diagnosis.

Therapeutic acupuncture is used for the relief of acute traumatic pain: musculoskeletal, arthritic or neuralgic pain. It is considered particularly effective in the treatment of migraine and tension headaches, but is also often used in the treatment of visceral pain as seen with cholelithiasis, appendicitis, gastritis, renal colic and peptic ulcer. Most observers concede that it has no benefit in the treatment of chronic pain produced by neoplastic metastases to bone.

In patients with chronic pain, acupuncture may be

¹This is Council on Scientific Affairs Report G. Past House Action: C-74:319.

²Reproduced with permission of the AMA Council on Scientific Affairs.

performed daily or two to three times a week for a total of 20 or more treatments. Experiments at the University of Washington Pain Clinic, however, have suggested that relief in patients with chronic pain was only transitory and most patients had to continue taking pain medication in substantial dosage.³

Acupuncture anesthesia has been used in China for major surgery. It is not used routinely for all surgical procedures but only supplementally in approximately 10% of the surgery performed in China. Such patients require supplemental preanesthetic medication, perhaps intravenous narcotics or local anesthetic infiltration of the wound. A critical analysis by Western physicians found that, while the Chinese considered acupuncture to provide successful anesthesia in 94% of cases, the criteria they were using were not comparable to American standards: it was observed by Bonica and his Committee¹ that the response in only 30% of patients would really be considered satisfactory by Western standards. Acupuncture anesthesia has the advantage of being quite safe, allows the patient to cooperate with the surgeon, does not require elaborate training and equipment and, finally, leaves no residual postanesthetic morbidity or depression. On the other hand, there are certain disadvantages to acupuncture anesthesia: the analgesia is not complete, muscle relaxation is not accomplished, traction on abdominal viscera often provokes pain, nausea or vomiting. In intrathoracic operations, the patient can experience dyspnea and other uncomfortable sensations.³

Clinical Trials

In a review of uncontrolled trials using acupuncture analgesia in the treatment of arthritis, orthopedic pain, neuralgias, headaches and miscellaneous causes of pain beneficial results were reported in 48% to 96% of the patients.⁴ In one study, the authors also determined the patient's hypnotizability using Spiegel's eye-roll test. They found that patients who were "excellent" hypnotic subjects had a better response to acupuncture than did those who were merely "good" hypnotic subjects. Poor hypnotic subjects had no pain relief from the treatment, with perhaps one exception.

In a series of controlled studies analyzed by Mendelsohn,⁴ four out of six studies showed no difference between the acupuncture treated group and a control group in percentage of patients showing improvement, although both groups showed from 20% to 70% improvement by the various criteria used. The number was small in all series but one. In that study, by Lee et al, 261 patients with chronic pain of three months to 40 years duration were given treatments that alternated between traditional and random points of needling. Needle placement at random points was found to be as effective as traditional acupuncture and at least 71% of the patients who completed either course had at least 50% relief of pain. However, at four weeks follow-up the percentage of improvement fell to about 35% of both groups. In other studies where "sham acupuncture" was used as a control, no difference in response was seen between those subjects who had the needles break the skin at normal acupuncture sites and those where the skin was not broken. Parenthetically, it should be noted that pain

investigators generally accept a placebo response of about 35% in pain patients.

In a recent well-designed study performed by the Acupuncture Center of Washington and the Acupuncture Clinic of Maryland,⁶ authentic classical acupuncture was randomly compared with delayed or inadequate treatment of chronic low back pain in 50 American patients. The immediate treatment group of patients received ten or more biweekly acupuncture treatments over five or six weeks and showed a 32% reduction in mean hours of pain per day, 51% reduction in pain score and a 33% reduction in pain pills per week. This contrasted with 0% to 2% change in these parameters during the same time period in a comparable group of patients whose treatment was delayed for eight weeks. Overall improvement was reported in 83% of the treated group and only 31% of the delayed treatment group. In the delayed treatment group 52%, 40% and 62% reductions were seen in those same pain parameters and 75% reported improvement in pain after a course of ten or more acupuncture treatments. At a late 40-week follow-up these same patients showed a pain score reduced by no more than 30% in any group; but, the hours of pain per day and a number of pain pills per week had reverted virtually to pretreatment levels in the delayed treatment and inadequate treatment groups.

Mechanism of Action

Evidently, acupuncture can produce substantial analgesia in selected patients but the mechanism does not operate consistently or reproducibly in the majority of people and does not operate at all in some people. It may be difficult to perform proper controlled studies because the acupuncturist is guided by the numbness and tingling felt by the patient when a proper acupuncture site is stimulated. In healthy volunteers, needling or electrical stimulation produce a rise in the threshold for certain painful stimuli. When the positioning of needles has been varied, the traditional acupuncture sites seem to have no great advantage over randomly selected sites. On the other hand, in Western medicine, segmental transcutaneous electrical stimulation has had a satisfactory effect on controlling certain types of hyperalgesia without effects on cutaneous pain thresholds.

Naloxone, which completely reverses the analgesic effects of administered opiates, has also been reported to produce a partial reduction in analgesia produced both by experimental acupuncture and by mid-brain electrical stimulation. This suggests that enkephalins, which respond to naloxone-like opiates, may be involved in acupuncture analgesia. There is some contradictory evidence in animals which would not support this view and much work remains to be done before it can be accepted. However, one must consider the possibility that the placebo effect and acupuncture may both have a physiological mechanism which accounts for pain control of significant degree in susceptible patients.⁵

Other possibilities that have been suggested to explain pain relief by acupuncture include the "gate" theory of Melzack and Wall which suggests that if pain fibers were carrying impulses from an acupuncture site, other impulses could not be received from the

painful organ. There is no anatomical basis for this explanation, but it still has some followers. The possibility that release of histamine or some other humoral mechanism may be involved has been suggested, but of course, more popular has been the prospect that this was some sort of placebo effect or a hypnotic effect in suggestible subjects. There are problems with each of these hypotheses and none is entirely satisfactory.

One measure of acupuncture effectiveness is the degree to which it has become accepted practice. In recent years it has been a topic for continuing medical education with increasing frequency. It has been practiced by several pain clinics in major medical centers around the country. Most private third party carriers will pay for acupuncture when prescribed or performed by a physician in the management of his patient. It has not been reviewed by the Blue Cross/Blue Shield Medical Necessity Project or subjected to the Clinical Procedure Review process of the Council on Medical Specialty Societies. However, the Medicare Coverage Manual (Part III) notes that "acupuncture is not considered reasonable and necessary within the meaning of section 1862(a) (1) of the law," and points out that "Three Units of the National Institutes of Health, the National Institute of General Medical Sciences, the National Institute of Neurological Disease and Stroke, and the Fogarty International Center have been designated to assess and identify specific opportunities and needs for research attending the use of acupuncture for surgical anesthesia and the relief of chronic pain." Finally, the committee which considers inclusion of entries into AMA's "Current Procedural Terminology—4th Edition" has not chosen to enter acupuncture as a recognized procedure.

Summary

At this time, it cannot be said that acupuncture has any more certain effect on pain than a placebo or a sham acupuncture. The study of acupuncture may provide very valuable clues to a better understanding of pain and perhaps of the placebo effect. While this procedure seems to have a firm place in traditional

Chinese medicine, it is undergoing changes year by year even in that environment. It is doubtful that acupuncture treatment can yet be considered to be a single treatment modality.

The Council on Scientific Affairs would conclude from this brief review that acupuncture:

- can alleviate pain and provide analgesia to permit surgery in as yet poorly defined circumstances;
- does not provide, in all surgical patients, a reproducible and predictable level of analgesia or muscle relaxation, even though it is safe, simple to perform and free of postanesthetic morbidity;
- provides only temporary relief for patients with chronic pain;
- should not be used as a symptomatic treatment for undiagnosed or serious disease, unless under the supervision of a physician.

Conclusions

The Council on Scientific Affairs therefore concludes that: (1) Acupuncture is an unproven modality of therapy. (2) Scientific assessment of acupuncture by an appropriately controlled clinical trial is needed to establish its clinical worth and is now proceeding under the cognizance of the National Institutes of Health. (3) Research on acupuncture may provide important clues to the understanding of pain, and perhaps of the placebo effect, as well as to an explanation of its mechanism of action.

REFERENCES

1. Bonica JJ: Acupuncture anesthesia in the Peoples' Republic of China. *JAMA* 229:1317, 1974.
2. Rubin P: Therapeutic acupuncture—A selective review. *South Med J* 70:974, 1977.
3. Murphy TM, Bonica JJ: Acupuncture analgesia anesthesia. *Arch Surg* 112:896, 1977.
4. Mendelsohn G: Acupuncture analgesia I. Review of clinical studies. *Aust N Z J Med* 7:642, 1977.
5. Wall PD, Woolf CJ: What we don't know about pain. *Nature* 287:185, 1980.
6. Chou SN: Acupuncture. *Mayo Clin Proc* 55:775, 1980.
7. Coan RM, Wong G, Lian Ku S, et al: The acupuncture treatment of low back pain: A randomized controlled study. *Am J Chin Med* 8:181, 1980.



Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 61-year-old woman was transferred to St. Thomas Hospital for nausea with severe "crushing" substernal pain radiating to the arm and neck. The pain persisted for 2½ hours and her electrocardiogram showed evidence of an anterior infarction.

During an antecedent admission one year earlier for angina pectoris Q waves were present in leads II, III and aVF and cardiac catheterization showed hypokinesis of the inferior wall. Significant stenoses were present in the anterior descending and right coronary arteries and the posterior descending coronary artery was occluded.

Shortly following admission the patient had an episode of ventricular fibrillation and was successfully defibrillated. Due to second degree heart block a pacemaker was implanted. A rhythm strip was obtained a few days later (Fig. 1).

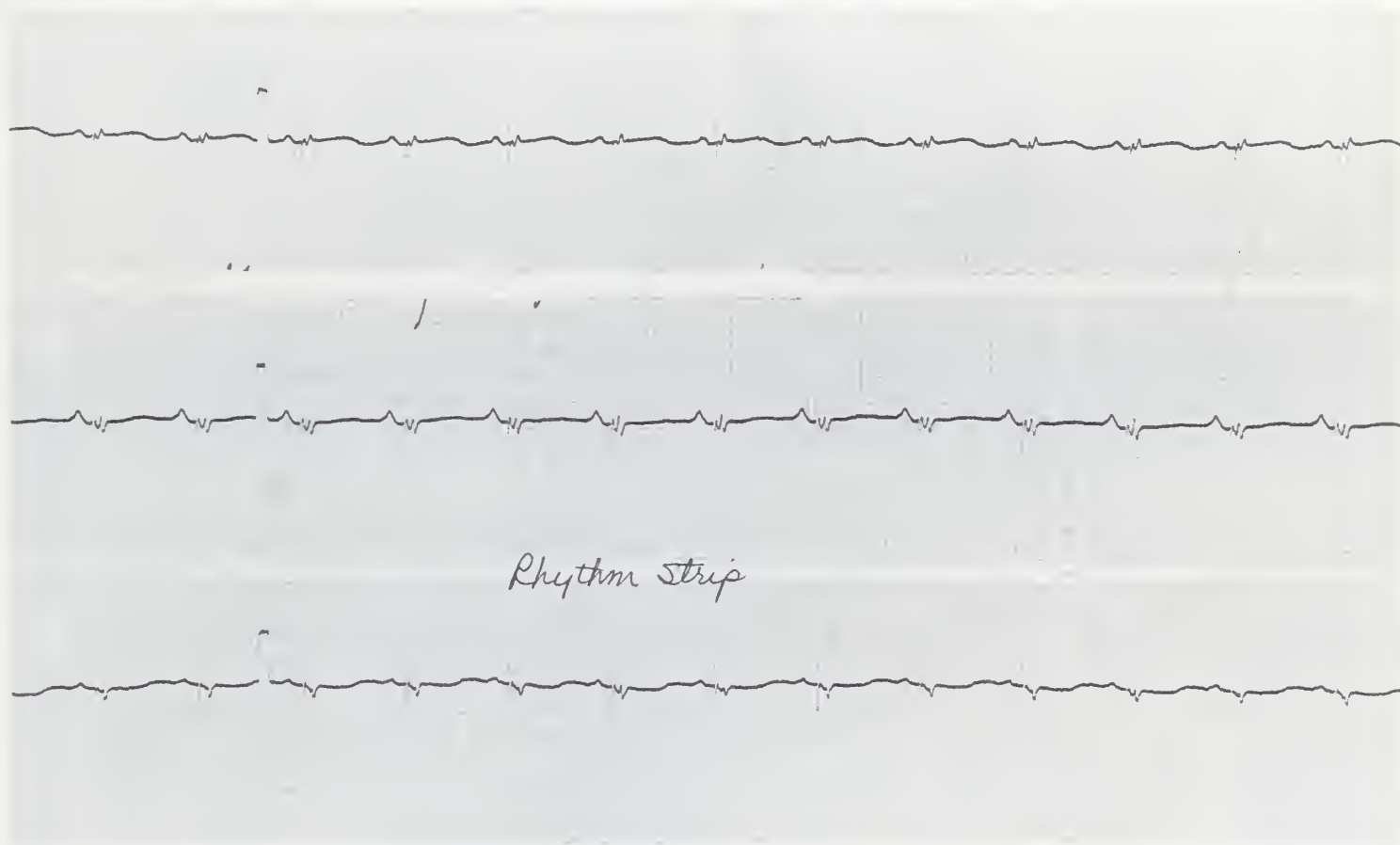


Figure 1

Discussion

This rhythm strip was obtained on a three-channel recorder giving a simultaneous recording of leads I, II and III. The rate is quite regular at 75/min. A P wave precedes all QRS complexes

and the PR interval is 0.18 seconds. A striking finding is the appearance of a ventricular pacing spike that appears to usher in each QRS complex. At first glance this may appear to be a ventricular pacemaker, but note that the pacing spike to pacing spike interval is exactly the same as the P to P interval. In order to know why the pacing spike has this fixed relationship to the P

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

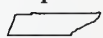
wave and QRS complex it is necessary to know the type of pacemaker implanted.

The pulse generator was an atrial-ventricular sequential, ventricular inhibited unit (Byrel Model 5992 Medtronic, Inc.). The rate was preset at 63/min. The pacemaker is programmed so that both atrial and ventricular pacing spikes are inhibited by a preceding R wave. Pacing spikes will not be inhibited by P waves. The programmed interval between atrial and ventricular pacing spikes is 0.25 seconds.

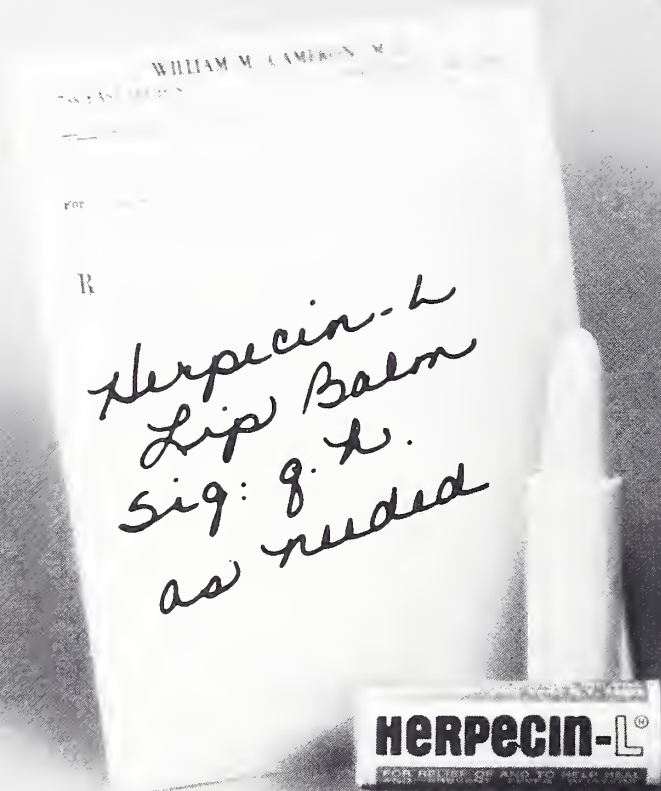
The pacing spike in the above rhythm strip is actually an atrial pacing spike. It does not capture the ventricle. The QRS morphology in leads I, II, and III has not been significantly changed by the pacing spike. The atrial pacing spike is linked to the preceding QRS complex, which it follows by a built-in escape interval of 0.72 seconds. The patient has a regular sinus rhythm and the RR interval is 0.80 seconds. This atrial pacing spike therefore precedes the R wave by 0.08 seconds. The ventricular pacing spike (pro-

grammed to occur 0.25 seconds later) is not seen because it is inhibited by the R wave.

This patient had modest variation in her sinus rhythm. When she had a somewhat slower rate the atrial pacing spike, of course, continued to appear 0.720 seconds after the preceding R wave and would move correspondingly back in the cycle into the P wave. With RR intervals in excess of 0.90 seconds the atrial spike will begin to capture the atrium (which has not undergone spontaneous depolarization). If the PR interval is longer than the preset atrial spike to ventricular spike interval of 0.25 seconds, the ventricular electrode will also be depolarized, capturing the ventricle. If (as in this case) the QRS depolarizes within 0.10 seconds prior to this interval the ventricular pacing spike will be inhibited.

DIAGNOSIS: (1) Normal sinus rhythm with a rate of 75/min; (2) AV sequential pacemaker with atrial pacing spike preceding QRS complex (ventricular pacing spike is inhibited). 

Dx: recurrent herpes labialis



OTC.

See PDR for
Product Information.

For samples, write:
Campbell Laboratories Inc.
P.O. Box 812-M, FDR Sta.
New York, NY 10150

In Tennessee, "Herpecin-L" Lip Balm is available at
all **Super D Drug Stores** and other select pharmacies.

Laboratory Training Services Provided by the Tennessee Department of Public Health

HOWARD BARRICK, Dr.P.H.


In 1976 the Division of Laboratory Services of the Tennessee Department of Public Health (TDPH) initiated a program of training opportunities as one method of fulfilling the commitment to improvement of the quality of services of clinical laboratories in the state. By 1978 a full schedule of workshops was provided (free-of-charge) to workers in the private sector as well as those in the State laboratories. Instruction, in the form of one- to five-day workshops, has been offered in the areas of microbiology, clinical chemistry, hematology, blood banking, management, and laboratory safety. The greatest emphasis has been in microbiology since proficiency-testing results indicated the greatest need for improvement of performance was in bacteriology. Every effort has been made to distribute the courses equally throughout the state. During the past two years, however, restriction on travel funds by the State of Tennessee has posed a challenge. This has been met by workshops sponsored financially by individual hospitals with the faculty and necessary paraphernalia provided by the State laboratory professionals. The workshops thus sponsored have been well received and well attended.

Historically, across the state, bacteriology has been the weakest area in terms of proficiency test results. During 1976-1977 unsatisfactory values were obtained in approximately 20% of the laboratories in hospitals with fewer than 100 beds. In 1978, the deficiency occurred in only 6%, while in 1981 it dropped to 2%. The utilization of training opportunities offered by the Division of State Laboratories is not the only factor involved in the improvement of proficiency, but the workshops have been influential especially in improvement of quality control and realization

of the limitations of small hospital laboratories. As a consequence, many now refer the bacteriology specimens to larger laboratories, thus providing accurate reports to the physicians responsible for patient care.

The central laboratory of the TDPH is the reference laboratory for microbiology services throughout the state. The personnel are required to be specialists as well as licensed technologists under the Tennessee Medical Laboratory Act. Requirements include a bachelor's degree, with specified courses and one full year of clinical laboratory instruction, including specialized course work and bench training. Even though there is great demand for personnel thus prepared, no institution of higher learning provided the possibility for students to fulfill these conditions in time to be eligible for employment upon graduation. Beginning in 1981, the central laboratory coordinated with Austin Peay College to provide the required clinical year for technologists specializing in microbiology. These students have completed three years of specified academic courses. Their fourth year, spent in the TDPH central laboratory, will provide the clinical experience and special courses required for licensure as a microbiologist as well as fulfillment for bachelor's degree. Five students are now enrolled in the class that will graduate in August, 1982. It is planned to expand this approval to include other colleges in the state, and also to increase the total to eight students per year.

Thus, the Laboratory Division of the TDPH is filling unmet needs in our state for important training of specialized personnel and upgrading laboratory services to the citizens of Tennessee.

For further information concerning training programs contact Michael Kimberly, Dr.P.H., or Howard Barrick, Dr.P.H., at Central Laboratory, Tennessee Department of Public Health, Cordell Hull Building, Nashville. 

From the Tennessee Department of Public Health, Nashville.

Tennessee Medical Association's

Exclusively Approved

**Disability Insurance
&
Major Hospital Insurance
Programs**

Administered By

Smith, Reed, Thompson & Ellis Co.

**P.O. BOX 1280
NASHVILLE, TENNESSEE 37202
PHONE 255-7625**

**Manager
WILLIAM H. ELLIS, C.L.U.**

**Supervisors
ROBERT K. ARMSTRONG
THOMAS G. HENRY, JR.
ROBERT M. GARRIGUES**

***Underwritten*
SINCE THE PROGRAM'S INCEPTION IN 1942**

***By*
Commercial Insurance Company
Newark, New Jersey**



ALLEN S. EDMONSON

Get Elected?

It's not news that you can't get elected if you don't run for office, and I hope it's no surprise to you that you are in politics already. If you're not aware that you are in politics just look at the newspapers and television. The goal of everyone in politics in one way or another is to get elected to office.

Now that we have agreed that we as physicians are already personally involved, don't just sit there; do something to get elected. It's not necessary for you to work at getting yourself elected, but if you don't run for office by supporting a worthy candidate, others certainly will, and will make all the choices to suit themselves.

Elections are won by persons who run the best race. Success requires time and effort—active physical participation. Contributions of stored time and effort—money—can buy physical participation and campaign materials. These contributions are not only an effective way to “get elected,” but for physicians they are certainly the most convenient.

This is an election year for all of Tennessee's U.S. congressmen and for one of our U.S. senators. Physicians are no less responsible than other citizens for filling these offices with responsible legislators. Political activity, either physical or fiscal, is highly appropriate for physicians; it should not cause uneasiness and certainly should not require any apology. Don't think that money can buy an election. Elections can't and shouldn't be bought, but without adequate campaign efforts and funds the best candidate can easily lose.

Your support for a candidate can get your views elected by electing to office someone who will listen to you. This is the desired result of most of our political activity. Tennessee IMPACT and national AMPAC groups have successfully done this for individual physicians who wish to participate collectively. Go about getting your views elected in whatever way you are most comfortable. But don't lose; get elected.

Allen S. Edmonson M.D.

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson

WINSTON P. CAINE, JR., M.D., Chatanooga

GEORGE W. SHANNON, M.D., Jackson

DILLARD M. SHOLES, JR., M.D., Johnson City

FRANCIS W. GLUCK, M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

MARCH, 1982

editorials

It's an Ill Wind—

Back when the children were growing up our family became "pot hunters" for a while, but good hunting areas for Indian artifacts were limited, and so we changed to being "rock hounds." Middle Tennessee, particularly the bowl in which Nashville is situated, is a fossil hunter's paradise, as 300 million years ago this area was at the bottom of an inland sea. Hunting fossils could there-

fore begin as near as our own front yard, replete as it is with crinoid stems and brachypods (which, incidentally does not make for a very good lawn).

For the past few years a controversy has been raging (this seems an appropriate word) between the evolutionists and the creationists, so called. This is a vastly oversimplified classification, since neither is a homogeneous group; they encompass a range of beliefs so broad as to constitute virtually a continuous spectrum. There is a vocal and overzealous minority at either end that stirs the fires and keeps the pot boiling, and it is safe to say that neither of them really knows what it is talking about; both views present a lot of speculation, and neither is subject to proof. The hard line creationists derive from the Bible notions that are mainly inferences and therefore hard to sustain, such as, for example a timetable for creation beginning in the relatively recent past. On the other side, transmigration of species is equally difficult to sustain. But I digress.

The scientific community generally has gotten its back up, not so much at the notion of creation, as most of them recognize that somewhere things had to arise from nothing, and therefore must have in some way been created. Possibly a majority even ascribe the origin, directly or indirectly, to God, even though their individual understanding of God may differ widely. But most of the scientific community has felt that in the anti-scientific, and even sometimes anti-intellectual, climate of the present day it is necessary to defend the scientific process against what it considers the imposition upon the school-children of arbitrary and unscientific teaching, under the guise of "equal time" for what is being proposed as an equally acceptable and likely mechanism.

The controversy has served the useful purpose of getting a lot of people to rethink their position, which is never bad if it is done with an open mind, and in the present case with recognition of our limitations, which are considerable. (This unfortunately does not always happen.) This defensiveness has led to the production of some extraordinary teaching material, including the astonishingly beautiful series "Life on Earth." The first of 13 segments of this BBC production has just aired on the Public Broadcasting System's member channels, and containing as it did some of the most magnificent nature photography ever filmed, it will be of great value in demonstrating where we (generic for the world)

are, where we came from, and what goes on within. Even though it also presents as fact some pure speculation, the documented facts are just as impressive by themselves, and the production reflects the usual superior BBC technology.

Even a cursory reading of the creation story in the Bible will show how meagre its details are, but a vast array of data has been manufactured to flesh out the skeleton. The facts comprise a really rather insubstantial ground from which to start a fight. What the Bible does say is maybe even more impressive than what it is only purported to say, but that seems not to satisfy some of its apologists.

It would seem not unreasonable to expect the antagonists on any side of this or any other quarrel to simply stick to the facts. On the other hand, if they did, I guess we would miss a lot of fun and fireworks, and "Life on Earth" likely never would have been made.

J. B. T.

On Taking a Stand: George Washington Remembered

Here I stand. God helping me, I can do no other.
—Martin Luther, A.D. 1519

Asked about his opinion of the United States after his recent visit here, the story goes that Pope John Paul II was effusive in his praise, but had found two things he disliked: the Polish jokes and M&M's. His interrogator said he understood about the Polish jokes, but what was wrong with M&M's? The Pope replied that he found them too hard to peel.

Ethnic jokes make up a great part of our humor, and we would be the poorer without them. The Irish, Jews, Catholics, Scotch (I understand that Scotch is what you drink—or some do—and the people are Scots, but that is how the jokes go), English, blacks, honkies, and almost any other group, such as the Aggies for instance, have all figured into those jokes, often the same ones with a different cast of characters. Whether or not a joke is in poor taste when told in a company that includes members of the group depends to a great extent upon laughing with instead of at them.

Situations sometimes arise in which we get a little nervous about telling ethnic jokes, and relief comes from comedians telling jokes about their own. Norm Ray, one of Nashville's resident Poles, and one of my favorite entertainers and a very funny man, when asked about New Year's resolutions said he promised not to tell any more Belle Meade jokes—at least until next week. This came as comic relief at a time when Poland was furnishing the world with a great deal of news, none of it giving any cause for mirth.

Back in the spring of 1946, I, along with about 5,000 others of our countrymen in the 306th Bomb Group, was stationed on an air base in Southern France minding 200 or so B-17 bombers, some of which had been stripped down for high altitude photoreconnaissance. The rest had been disarmed and were parked alongside the airstrip, destined ultimately for destruction. It was soon enough after the war that zones of influence between the Soviet Union and the Western allies were still being shaken out. An air corridor had been established over Soviet-dominated Czechoslovakia, through which allied planes could fly from Berlin to Vienna, and when an American C-47 flying through that corridor was shot down by Soviet planes, there was a flurry of activity on the base as the B-17s were hurriedly re-armed. The situation was somehow defused, but the United States came out the loser in the first of a series of confrontations, the latest being our current one in Poland.

During the interval, as the balance of power has gradually shifted, we have abandoned a succession of our friends to the tender mercies of the Soviet system. We have not made the world safe for democracy because we were not willing to keep on making the world safe for democracy. It is not something to be done once and then forgotten. Our honor is besmirched, and our record for helping our friends is not enviable. With considerable justification, we are not trusted. I remember storms of protest over Soviet invasion of Czechoslovakia, but the freedom fighters were in the end abandoned. Another storm of protests arose as Soviet tanks drove the Hungarians through the streets of Budapest, but Hungarian freedom fighters were left to their fate. More recently came the invasion of Afghanistan. All those, said the Soviets, were internal matters, and none of our business. It was convenient, and appeared safer, to think so; and so we did. It was not safer.

Now the action has shifted to Poland, that

current butt of our jokes—Poland, the home of Marie Curie, Frederick Chopin, and Jan Ignace Paderewski. Poland, the home of Lech Walesa and Solidarity. How will we play it this time?

Responsible groups of physicians, namely Physicians for Social Responsibility and The International Physicians for the Prevention of Nuclear War, have set about trying to educate the world as to the impossibility of winning a nuclear war and of even beginning to cope with the medical problems incidental to it. To maintain their credibility, they are—officially at least—confining their remarks to medical aspects of the problem, avoiding the sticky political issues. One wishes them well, as the alternative is racial suicide. Nonetheless, while insisting that only in that context can they even hope to be heard, one has to recognize that the political issues are the overriding ones.

In the best of all possible worlds, which will come when Jesus establishes His Kingdom on earth, the lion will lie down with the lamb. Unfortunately for our well-being, our leaders since 1945 have labored under the misapprehension that this can be effected by man. In the real world, whether it is on our city streets or in the halls of international diplomacy, peace is not assured by fear and timidity, by a desire for peace, or by turning the other cheek, however much we might wish it so. It would seem Poland is our last allowable testing ground.

Certainly no one wishes nuclear war, and I believe no one sane person feels it to be a necessary alternative to anything. Unfortunately, some of those in command in the world are less than sane. Nonetheless, there are worse things than being cut to bits or blown to smithereens. The Polish General Thaddeus Kosciuszko, who threw in his lot with George Washington, spending his life in the cause of freedom in America, Poland, and France, thought so. Washington himself, the 250th anniversary of whose birth we celebrate this year, and the signers of our Declaration of Independence, all of whose lives were ultimately destroyed by that act, certainly thought so, too. So did unnumbered legions of American colonials and freedom fighters through the ages the world over.

Perhaps we have waited too long to take our stand. Even though the present administration seems of a mind to do so, perhaps the American people will be unwilling even to take one now, though I believe the American people have all along been more willing than their leaders. Early

in World War I, the Lafayette Escadrille arrived in Paris with the words, "Lafayette, we are here." It seems time to say, even though our physical presence may not be required, "Kosciuszko, we are here! And here we stand. God helping us, we can do no other!"

J. B. T.



Exploding Implants

To the Editor:

Thanks for providing us with an excellent state medical journal. On page 898 of the December, 1981, issue is a "Medical Brief" about silicone breast implants expanding at high altitudes, which contains erroneous information.

The article states that the breast implants used by plastic surgeons in augmentation mammoplasty or breast reconstructions contain *air*. This is incorrect. The implants contain either silicone gel or normal saline, neither which will expand any more than normal body tissues or fluids at high altitudes. Several of my patients with breast implants have flown to 20,000 feet in an uncompressed airplane and have had no breast complaints.

James H. Fleming, M.D.
President-Elect
Southeastern Society of Plastic and
Reconstructive Surgeons

The item Dr. Fleming is referring to was submitted by the American Medical Association and was an abstract of a report published in JAMA (244:2209, 1980).—ED.



Charles Whitman Berg, age 71. Died October 3, 1981. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Theodore Morrison Crain, age 79. Died December 24, 1981. Graduate of University of Tennessee College of Medicine. Member of Putnam County Medical Society.

Orville C. Gass, age 73. Died December 30, 1981. Graduate of University of Tennessee College of Medicine. Member of Chattanooga-Hamilton County Medical Society.

Alfred Hach Page, age 65. Died January 12, 1982. Graduate of University of Tennessee Center for the Health Sciences. Member of Memphis-Shelby County Medical Society.

Charles W. Reavis, age 69. Died September 30, 1981. Graduate of the Medical College of Virginia. Member of Chattanooga-Hamilton County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Stephen S. Hawkins, M.D., Chattanooga
Michael F. Lett, M.D., Chattanooga

COCKE COUNTY MEDICAL SOCIETY

Jea Wook Sim, M.D., Newport

CUMBERLAND COUNTY MEDICAL SOCIETY

Charles P. Bownds, M.D., Pikeville

DICKSON COUNTY MEDICAL SOCIETY

Walter A. Bell, III, M.D., Dickson

KNOXVILLE ACADEMY OF MEDICINE

Harry Louis Bishop, M.D., Knoxville
Gerald Lee Blossom, M.D., Knoxville
Robert Edward Finelli, M.D., Knoxville
James Allen Greene, M.D., Knoxville
Bert Allan Hampton, M.D., Knoxville
Yoo Keun Kim, M.D., Knoxville
A. Bernhard Kliefoth, III, M.D., Knoxville
Vichien Lorch, M.D., Knoxville
Joseph Corbin Parker, Jr., M.D., Knoxville
Thomas Reid Traylor, M.D., Knoxville
Robert Earl Walker, M.D., Knoxville

LAKEWAY MEDICAL SOCIETY

Charles Hugh Lindsey, M.D., Morristown

OVERTON COUNTY MEDICAL SOCIETY

Jeffery L. Wallace, M.D., Livingston

ROANE-ANDERSON COUNTY MEDICAL SOCIETY

Charles W. Bruton, Jr., M.D., Oak Ridge
Robert Dotson, M.D., Oak Ridge
Allan C. Schold, M.D., Oak Ridge

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

John J. Bandeian, M.D., Bristol
Michael H. Hartsell, M.D., Kingsport
David A. Holt, M.D., Kingsport
William A. Lamb, M.D., Kingsport
Marvin Lymberis, M.D., Kingsport
Earl K. Wilson, M.D., Bristol

WILLIAMSON COUNTY MEDICAL SOCIETY

Raymond L. Meneely, M.D., Franklin

TMA Members Receive AMA Physician's Recognition Award

Twenty-three TMA members qualified for the AMA Physician's Recognition Award during December 1981.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Richard O. Bicks, M.D., Memphis
William A. Bryant, M.D., Woodbury
Jerry D. Clark, M.D., Chattanooga
John R. Crockarell, M.D., Memphis
Anh H. Dao, M.D., Nashville
James R. Feild, M.D., Memphis
Richard E. Green, M.D., Murfreesboro
Ronald O. Hadden, M.D., Chattanooga
Warren G. Hayes, M.D., Springfield
William D. Hudson, M.D., Kingsport
Joo Taek Kim, M.D., Morristown
Frederick K. Kirchner, Jr., M.D., Nashville
Allyn M. Lay, M.D., Columbia
Nelson E. Link, M.D., Bristol
Frank London, M.D., Knoxville
Edward T. Newell, M.D., Chattanooga
Don J. Russell, M.D., Chattanooga
John R. Semmer, M.D., Knoxville
Liselotte E. Sigmar, M.D., Oak Ridge
Archibald Y. Smith, III, M.D., Signal Mtn.
Lee W. Stewart, M.D., Nashville
James VanBlaricum, M.D., Winchester
Sidney D. Vick, M.D., Memphis

personal news

James B. Bell, M.D., has been named chief of the medical staff at East Tennessee Baptist Hospital in Knoxville. Other officers elected include *Joe Beals, M.D.*, vice chief of staff; and *William R. Sullivan, M.D.*, secretary.

John F. Boxell, M.D., has been named chief of the medical staff at Memorial Hospital in Chattanooga. Other officers elected include *Robert W. Myers, M.D.*, vice chief of staff; and *John D. Cranwell, M.D.*, secretary.

Grace E. Moulder, M.D., Shelbyville, was honored upon her retirement by the Bedford County General Hospital in a resolution which recognized her contributions to the medical community during her 29 years of practice.

Cecil D. Rowe, M.D., was elected chief of the medical staff at Park West Hospital in Knoxville. Other officers elected include *Ronald L. Pack, M.D.*, vice chief of staff; and *Roger C. VanArsdell, M.D.*, secretary-treasurer.

national news

From the AMA's Office in Washington, D.C.

Programs to Shift to States

The Medicaid program would be federalized and responsibility for some \$47 billion worth of now federal programs would be shifted to the states in a dramatic proposal for governmental realignment called for by President Reagan in his State of the Union address.

The President said that starting in fiscal 1984 (a year from next October), the federal government "will assume full responsibility for the cost of the rapidly growing Medicaid program to go along with its existing responsibilities for Medicare."

At the same time the President advanced a "bold, innovative program" of returning some \$47 billion of federal programs to states and localities over a ten-year period.

"As part of a financially equal swap, the states will simultaneously take full responsibility for such programs as Aid to Families with Dependent Children (AFDC) and food stamps. This will make welfare less costly and more responsive to genuine need because it

will be designed and administered closer to the grass roots and the people it serves."

Complete details of the program shifts won't be known for a while. But it is known that the following health-related programs will be turned over to state jurisdiction: Child Nutrition, Child Welfare, Child Abuse, Social Services Block Grant, Prevention Block Grant, Alcohol, Drug Abuse and Mental Health Block Grant, Primary Care Block Grant, Maternal and Child Health Block Grant, Primary Care Research and Development, Black Lung Clinics, Migrant Health Clinics, Family Planning, Women, Infants and Children (WIC).

Other programs that apparently would revert to the states include school lunch program, vocational rehabilitation, energy aid for the poor, water and sewer grants, aid for highways outside the interstate system, block grants for social services and community services, and others.

"In a single stroke, we will be accomplishing a realignment that will end cumbersome administration and spiraling costs at the federal level while we ensure these programs will be more responsive to both the people they are meant to help and the people who pay for them," President Reagan told Congress.

Under the swap, the federal government will apply the revenue from certain excise taxes to a grass-roots trust fund for the states. Some \$28 billion a year will flow into the fund. By 1988 the states would be in complete control of more than 40 federal grant programs. The trust fund would start to phase out and the excise taxes would be turned over to the states.

The states would be given wide leeway on how to use their share of the trust fund. They could use it to pay for federal grants in areas such as transportation, education and social services; or they could use it for other purposes.

Both Medicaid and Medicare were marked for economies by the President who pointed to these programs in declaring that he will propose savings of \$63 billion over four years in entitlement programs.

No specific dollar savings were mentioned for the two health programs, but the administration has been considering slashes totaling \$5 billion a year.

Medicare and Medicaid are programs "with worthy goals," said President Reagan, but "their costs have increased from \$11.2 billion to almost \$60 billion, more than five times as much, in just over ten years."

Said the President:

"Waste and fraud are serious problems. Back in 1980, federal investigators testified before one of your committees that 'corruption has permeated virtually every area of the Medicare and Medicaid health care industry.'

"One official said many of the people who are cheating the system were 'very confident that nothing was going to happen to them.'

"Well, something is going to happen. Not only the taxpayers are defrauded. The people with real dependency on these programs are deprived of what they need because available resources are going not to the needy but to the greedy. The time has come to control the uncontrollable."

Among the cuts the administration is expected to recommend for Medicare and Medicaid are a flat 2%

reduction in the Medicare reimbursement rate for hospitals; a limitation of 5% in the rise for the physicians' fee screen; a reduction to 80% of Part A, the usual and customary reimbursement for hospital-based physicians; limitation of physician reimbursement for services in hospital outpatient departments; elimination of the subsidy for private hospital rooms; indexing of the Medicare Part B physician services deductible to the Consumer Price Index, and mandatory enlistment of the federal work force in the Medicare program.

Explaining the need for transferring programs to the states, the President cited "the overpowering growth of federal grants-in-aid programs during the past few decades."

In 1960, he said, there were 132 categorical grant programs costing \$7 billion. Today there are about 500 programs costing almost \$100 billion.

"Neither the President nor the Congress can properly oversee this jungle of grants-in-aid; indeed, the growth of these grants has led to a distortion in the vital functions of government. . . ."

One intergovernmental commission, President Reagan noted, has said that the growth of grants-in-aid has made the federal government "more pervasive, more intrusive, more unmanageable, more ineffective, more costly and above all more unaccountable."

The fate of the President's proposals in Congress is uncertain. Democrats were indicating they may put up stiff resistance. The November elections are only months away, and the controversial, sweeping nature of the proposals will set off a prolonged debate that might spill over into the next session of Congress.

Voluntary Health Coalitions Endorsed

The American Medical Association joined health providers and insurers, organized labor, and business in formally endorsing the concept of voluntary local coalitions to tackle the problems of health care costs, quality and access.

The unprecedented gathering of major national organizations representing all aspects of health care to agree on common goals was announced at a news conference here attended by principal officers of the organizations.

The withdrawal of federal funding in health and the new emphasis on private solutions was cited by Harvard University Professor John Dunlop, coordinator of the national coalition effort, as major factors in the encouragement of coalitions.

The six organizations "seek to encourage and to assist the efforts in a growing number of local communities in which local affiliates of the national organizations have voluntarily joined together to put into effect common programs for utilization review, facility and technology review and planning, and other activities most appropriate to the particular locality to restrain cost increases while recognizing an appropriate concern over quality and access to health care," Dunlop told reporters.

In addition to the AMA, organizations involved are the American Hospital Association (AHA), the AFL-CIO, Blue Cross and Blue Shield Associations, the Health Insurance Association of America (HIAA) and the Business Roundtable.

Noting that the AMA has been responsible for developing 25 of the present 70 coalitions, AMA Executive Vice President James Sammons, M.D., told the news conference the primary focus of coalitions is to determine what the problems of the local area are and to come up with programs for dealing with them. He described the coalition movement as "a totally different" activity than the voluntary effort (VE) which is a national program to restrain cost rises.

Dr. Sammons said the AMA opposes federal health planning but believes that voluntary planning at the local level "is necessary and desirable."

The AMA long has recommended experimentation with health insurance benefit packages through such steps as removing mandatory hospitalization for patients to receive benefits and requirements for care in specific types of institutions, Dr. Sammons said. "All of us must look at changes in benefit packages that can be productive."

AMA Defends Code of Ethics

The AMA has argued before the Supreme Court that when professionals advance their ethical standards for the benefit of patients the government should encourage the effort, not hinder it.

The Justices were urged in a hard-hitting, one-hour oral argument to reject the Federal Trade Commission's actions against the AMA's ethical restrictions against misleading advertising.

The FTC should have given the AMA a medal instead of a long and tedious trial, said AMA counsel Newton Minnow. He noted that the AMA was the first professional organization to rewrite its ethical codes following the Supreme Court's historic 1975 decision rejecting a state bar association's fee standard.

The new AMA code limited the restrictions against physician advertising to make unethical only advertising that is false, misleading or deceptive.

But the FTC didn't pay attention, said Minnow. The agency is obsessed with the past, unconcerned with the present and blind to the future, the lawyer said.

Dismissing the FTC conspiracy charge as "non-sense," the AMA attorney said the agency is determined to "press for its pound of flesh" despite the AMA's compliance. The AMA's warnings to the FTC of the impact of improper advertising on patients went unheeded, he said.

It was wrong of the FTC not to even look at the AMA's current standards, he said. The protection of the public is at stake, Minnow said. "If a doctor advertises that he cured his last 25 patients, we think that is false and misleading. We are dealing with health, life and safety." Why should the government try to stop guidelines intended to protect and benefit the public, asked the Chicago lawyer?

Institute Recommends PSRO Sunshine Law

An Institute of Medicine committee has recommended that the public be given unrestricted access to statistical information gathered by professional standards review organizations (PSROs) on the federal health care services provided by individual hospitals and other institutions.

The committee suggested that information on care provided by individual physicians and other health care practitioners be provided in coded form only. Such statistical information would include the number and duration of hospital stays for patients receiving federal health care benefits, diagnosis before and after treatment, aggregate demographic data, mortality rates, etc.

The committee stressed that any public release of medical statistics should guarantee the privacy of individual patients.

The Institute report was given to the House Subcommittee on Government Information and Individual Rights and the House Subcommittee on Health and the Environment.

Current federal regulations require PSROs to provide the public upon request with information only on individual institutions and only if the names of physicians cannot be determined either "directly or indirectly." Federal regulations prohibit public release of statistics on care provided by individual physicians.

The Institute committee's conclusions were limited to disclosure policies for PSRO data on federal patients. However, the importance of "enhancing consumer choices and the public accountability of medical institutions," said the committee, is "powerful enough to warrant more general application of its recommendations," to other medical review data collected by government agencies or private organizations.

Recent court decisions have held that PSROs are not agencies of the federal government and thus subject to federal public disclosure requirements.

April 26-29	American College of Obstetricians and Gynecologists—Convention Center, Dallas
April 26-29	Southwestern Surgical Congress—Hotel del Coronado, Coronado, Calif.
April 28-May 1	American Association for the History of Medicine, Washington, D.C.
May 2-3	American Laryngological Association—Breakers Hotel, Palm Beach, Fla.
May 5-6	American Society for Head and Neck Surgery—Breakers Hotel, Palm Beach, Fla.
May 5-8	Virginia Society of Ophthalmology and Otolaryngology, Inc.—Williamsburg Conference Center, Williamsburg, Va.
May 6-9	Christian Medical Society—Summit Hotel, Dallas
May 7-9	Society for Pediatric Radiology—Hilton, New Orleans
May 7-10	American Society for Clinical Nutrition—Sheraton Hotel, Washington, D.C.
May 10-13	Aerospace Medical Association—Sheraton Bal Harbour, Bal Harbour, Fla.
May 11-14	Society for Pediatric Research—Sheraton Hotel, Washington, D.C.
May 13-15	American Thermography Society—Georgetown University Medical Center, Washington, D.C.
May 14-15	Cystic Fibrosis Foundation—Sheraton Hotel, Washington, D.C.
May 14-16	American Society for Adolescent Psychiatry—King Edward Hotel, Toronto
May 16-20	American Urological Association—Radisson-Muehlebach Hotel, Kansas City, Mo.
May 18-19	Society for Surgery of the Alimentary Tract—Hyatt Regency, Chicago
May 22	Muscular Dystrophy Association—Sonesta Beach Hotel, Key Biscayne, Fla.

Ron E. Gant Named TMA Executive Assistant for Legislation



The Tennessee Medical Association announces the employment of Mr. Ron E. Gant to serve as Executive Assistant for Legislation. He joins the TMA after serving as the Chief of Quality Assurance in the Division of Health Care Facilities of the Tennessee

Department of Public Health.

A native of Shelbyville, Tenn., Gant, age 35, received his B.S. degree in business administration from Tennessee Technological University in 1968.

Prior to becoming Chief of Quality Assurance, Ron served in various other capacities in the Departments of Public Health and Personnel for the State of Tennessee and with Commerce Union Bank, Nashville.

Ron is married to the former Debby Young of Sparta and has a daughter Kristin, age 7.

announcements

CALENDAR OF MEETINGS

NATIONAL

April 1-4	American Medical Student Association—San Diego
April 3-5	American Medical Society on Alcoholism—Sheraton, Washington, D.C.
April 19-22	American College of Emergency Physicians—Marriott's Resort, Kaanapali Beach, Maui, Hawaii
April 21-23	American Surgical Association—Sheraton-Boston Hotel, Boston
April 25-27	American Society of Clinical Oncology—Stouffer's Riverfront Towers, St. Louis
April 25-29	American College of Cardiology—Atlanta

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	James D. Snell, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	Robert Oldham, M.D.
Orthopedics	Paul W. Griffin, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everette James, Jr., Sc.M., J.D., M.D.
Renal Diseases	H. Earl Ginn, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Pediatric	James A. O'Neill, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, Jr., M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232, Tel. (615) 322-2716.

Continuing Education Schedule

April 15	Annual Frank H. Luton Lecture in Psychiatry (1 hour)
April 19-23	Annual James C. Overall Visiting Professor in Pediatrics (16 hours)
April 30	Annual Barney Brooks Lecture in Surgery (1 hour)
April 30-May 1	Southern Society of Clinical Surgeons and the H. Wm. Scott Society, Scientific Sessions
May 19-20	21st Annual Seminar in Psychiatry (for nonpsychiatrists) (11 hours)
July 7-10	Vanderbilt/Bowman Gray Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July 27-31	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions

For information contact Division of Continuing Medical Education, Vanderbilt University School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashhurst, M.D.

Pediatrics.....	E. Perry Crump, M.D.
Surgery.....	Louis J. Bernard, M.D.
General.....	Charles E. Brown, M.D.
Neurological.....	David B. Todd, M.D.
Thoracic and Cardiovascular.....	Ira D. Thompson, M.D.
Urology.....	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

April 20-22	Sparer Visiting Professorship (Psychiatry)
April 24	Financial Management—New Orleans
April 24-25	GI Radiology
May 8	Financial Management—Atlanta
May 14-15	Hypnosis
May 22	Financial Management—Orlando
May 26-29	Rhinoplasty (cosponsored with Methodist Hospitals of Memphis)
July 21-24	Snowmass Cardiology Conference
Aug. 2-6	Practical Skills Workshop
Sept. 23-24	Newborn Conference
Oct. 1-2	Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)

Chattanooga

April	Infectious Diseases
May 6-7	Summer Emergencies
June 3-6	Family Medicine Review

Knoxville

April 5-7	Hypertension
April 23	Legal, Moral and Ethical Responsibility of the Hospital Pharmacist Today
Nov. 6-7	Loss Prevention

Nashville

May 21-22	Loss Prevention
-----------	-----------------

World's Fair

June 10-12	Otolaryngology for the Primary Care Physician
June 17-19	Great Smoky Mountain Pediatric Seminar
June 20-23	Update in Family Medicine
June 21-23	Great Smoky Mountain Pediatric Seminar
Aug. 19-21	Cardiology Update
Sept. 2-4	Perinatology for Practitioners
Sept. 9-11	Perspectives in Medical Genetics 1982
Oct. 13-15	3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology
Oct. 21-23	Office Ultrasound
Oct. 27-30	Cancer Concepts

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

BAPTIST HOSPITAL OF NASHVILLE

May 1-2	Nashville Intraocular Lens Implant Course and Refractive Surgery Symposium—Baptist Hospital, Nashville. CME accredited. <i>Fee:</i> \$250.
---------	--

For information contact Celeste Thompson, Executive Secretary, Eye Foundation of Tennessee, 201 Mid-State Medical Center, Nashville, TN 37203, Tel. (615) 327-9151.

BAPTIST MEMORIAL HOSPITAL

April 30-May 1	Current Controversies in Chron's Disease
May 6-8	Gynecological Surgery
May 21-22	Hypertension: 1982

For information contact Educational Support Services, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

MEDICAL COLLEGE OF VIRGINIA

April 22-24	Pediatric Springfest—The Williamsburg Hospitality House, Williamsburg, Va.
April 23-25	Emergency Medicine for the Primary Care Physician—Fort Magruder Conference Center, Williamsburg, Va.

For information contact Kathy E. Johnson, Box 48, MCV Station, Richmond, VA 23298, Tel. (804) 786-0494.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

July 26-28	Pediatric Update 1982—Kiawah Island, S.C.
Aug. 2-6	Taxes and Investments—Hilton Head Island, S.C.
Aug. 9-11	High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

Rheumatologists Note:

Letter from Dr. James Roane to David Campbell, Abingdon, Va.*

Nashville June 25, 1817

My dear Sir,

Dr. Newman and myself think Cousin Maria's complaint, from the description you have given of it, to be Rheumatic. It would however have been more satisfactory also to have been informed of the state of her appetite, of the situation of her bowels, and regarding her monthly periods. We recommend to take about half a pint of blood and a purgative as preparatory to the following. Dissolve one ounce of Soda in a pint of strong decoction of Seneka Snakeroot, take of this 2 table spoonsful evening and morning in water or in some pleasant tea.

It would likewise be proper to wear a "warm plaster" between the shoulders. Or what is full as effectual & probably easier to procure, a plaster of common turpentine made by spreading the turpentine on some soft leather or buckskin. It ought to be at least 6 inches long & 3 or 4 wide, extending down the back & worn during a month or longer after using the Seneka decoction a week or 10 days. Let her take 2 tea-spoonsful of Volatile tincture of Guaiacum in some pleasant vehicle, still, however continuing the Seneka. If it were not on account of the cough one would also insist on the use of the cold shower bath once a day, but while her cough continues it would be improper.

Respecting diet etc her own experience is the best guide.

We all got to Nashville safely & well. Laura has been somewhat unwell from cutting teeth. I think my prospects are brightening since I have come back.

Nancy [his wife] & M. Irby [Mrs. Irby, her mother] join their respects to mine to cousin Maria [Mrs. David Campbell] & all our friends.

Your,
J. Roane

According to his biography in *The Centennial History of the Tennessee State Medical Association, 1830-1930* (Tennessee State Medical Association, Nashville, 1930, pp 189-191), Dr. James Roane (1790-1833) was born in Jefferson County (probably Greene County, as Jefferson County was not created until 1792). He was the son of

Archibald Roane, of Scotch-Irish ancestry, a native of Pennsylvania, judge of the Supreme Court of Tennessee, and the second governor of the state (1801-1803). James was educated at Blount College (which became, in time, the University of Tennessee). He tried the study of law and mercantiling, without satisfaction, then studied medicine under Dr. Newman of Nashville. After four years of medical practice in Murfreesboro he went to New York and obtained his M.D. degree. He had a successful practice in Nashville until his untimely death from cholera in the 1833 epidemic. Dr. James Roane was the first president of the Medical Society of Tennessee when it was organized in May, 1830, in Nashville.

Dr. Andrew Roane, brother of Dr. James Roane, was my great-great-grandfather. Dr. Andrew Roane was a pioneer physician in Calhoun County, north Mississippi. At the time Archibald Roane was governor, the Tennessee state capital was Knoxville, and his home, where these two sons grew up, was 12 miles southwest of Knoxville, in Knox County, near Concord. Dr. James Roane and his mother, Ann Campbell Roane, are both buried in the Nashville City Cemetery. She came to live with him in Nashville after her husband, Gov. Roane, died in 1819.

The recipient of Dr. James Roane's letter was David Campbell of Abingdon, Va., a first cousin of Dr. Roane and governor of Virginia, 1837-1840.

The patient, Cousin Maria, must have had a good constitution for she withstood the "Rheumatic" and the treatment and lived until 1859.

Thomas Fite Paine, Jr., M.D.
Department of Medicine
Vanderbilt University
School of Medicine
Nashville, TN 37232

*Gov. David Campbell papers, Tennessee State Archives, Nashville. (Spelling and punctuation is left as it was in the original.)

Highlights of the TMA Board of Trustees Meeting

January 9-10, 1982

The following is a summary of the major actions by the Board of Trustees of the Tennessee Medical Association at its regular first quarter meeting in Nashville on January 9-10, 1982.

THE BOARD:

TMA Public Awareness Campaign

Instructed its Communications and Public Service Committee to investigate the possibility of formulating a plan to air public service messages and bring the plan back to the Board for consideration and possible funding.

Legislative Committee Appointment

Appointed Hobart Beale, M.D., and James W. Garner, Jr., M.D., to the Committee on Legislation.

Impaired Physician Committee

Heard a report that the Impaired Physician Committee has 74 identifications of impaired physicians, with 19 physicians having been returned to their practice after a course of treatment and rehabilitation. Committee Chairman John B. Dorian, M.D., appeared to request establishment of a loan fund for impaired physicians. The Board approved the loan fund for physicians facing severe financial hardship. Start-up funds will be contributed by TMA plus an annual contribution until the fund is self-sufficient.

Communications and Public Service

Heard a report that 619 persons across Tennessee took part in last October's ten seminars for medical assistants on insurance claims processing, sponsored by TMA and American Association of Medical Assistants, Tennessee Society. The Board approved TMA's co-sponsorship of similar seminars in the state again in 1982.

Committee on Medicine and Religion

Heard a report that Anne Wentz, M.D., Vanderbilt University Hospital, has been chosen to discuss, "Surrogate Motherhood," at the TMA prayer breakfast to be held during the 147th Annual Meeting of TMA in Memphis next April. The breakfast is arranged and sponsored by the Committee on Medicine and Religion.

Appointment of Standing and Special Committees

Considered and nominated physicians to serve on each of the Standing and Special Committees of the Association. Trustees took into consideration the geographical locations of the state and established the terms of the committee members in keeping with the Constitution and By-Laws requirements.

Appointment of TMA Nominating Committee

Appointed these physicians to the TMA Nominating Committee for the House of Delegates: West Tennessee—Oscar M. McCallum, M.D., John B. Dorian, M.D., and James W. Shore, M.D.; Middle Tennessee—Lloyd T. Brown, M.D., John K. Wright, M.D., and James C. Bradshaw, Jr., M.D.; and East Tennessee—E. Kent Carter, M.D., George A. Zirkle, Jr., M.D., and David H. Turner, M.D.

TMA-SEF Board Appointment

Reappointed John E. Burkhart, M.D., and Charles E. Allen, M.D., to three-year terms on the Board of Directors of the TMA-Student Education Fund.

Status of Veteran Members

Referred to the Constitution and By-Laws Committee for clarification and/or modification a question regarding membership status of veteran members whose license to practice has been revoked as a result of nonpayment of re-registration fees.

Letter and Resolution from THA

Referred to the Committee on Hospitals for study and recommendation a letter and resolution from the Tennessee Hospital Association dealing with nursing and soliciting TMA support for a statewide Commission on Nursing.

**Insurance Committee
Report**

Heard a report that the Workman's Compensation Group Insurance Plan for TMA membership returned a total of \$10,121 in premiums to members participating in the plan in 1981.

**Prudential Insurance
Company Problem**

Agreed that Board Chairman James C. Bradshaw, Jr., M.D., should write a letter to the State Insurance Commissioner regarding a problem with Prudential Insurance Company on insurance policies requiring a mandatory second opinion prior to certain surgical procedures.

**Accidental Death
Insurance Plan**

Referred to the Group Insurance Committee a proposed group insurance plan that would provide \$100,000 life insurance for all business and pleasure travel on scheduled airlines for each TMA member.

AMA Council Nomination

Agreed to nominate Thomas K. Ballard, M.D., to serve on the Accreditation Council for Continuing Medical Education of the American Medical Association.

**Legislation Re:
Premarital Serology
Test**

Heard a report regarding a plan to recruit blood donors in which individuals donating blood would be given a free premarital serology test with results of the tests being given to the individual to take to his or her personal physician. The Board agreed that TMA has no objection if the patient designates a physician to insure that the physician would receive the report.

**SVMIC Quarterly
Report**

Heard a report from Allen S. Edmonson, M.D., TMA President, that State Volunteer Mutual Insurance Company (SVMIC) has declared a \$2.5-million dividend which will be credited against each policyholder's 1982 premiums. Dr. Edmonson also reported that SVMIC will sponsor a series of risk management seminars to be held in Memphis, Nashville and Knoxville in 1982. A 10% premium reduction will be given to all policyholders attending the seminars.

**Request from Southern
Medical Association**

Endorsed the Continuing Medical Education (CME) program of the Southern Medical Association.

**Appointment of TMA
Accountant and Attorney**

Reappointed Mr. Charles L. Cornelius, Jr., as TMA's legal counsel for 1982 and Mr. Ezra Jones, CPA, as TMA's accountant for 1982.

**Financial Statement
and Budget**

Approved the 1981 Financial Statement and Operating Report, and the 1982 TMA Budget. 

**SEABROOK ISLAND
SOUTH CAROLINA**

Luxury resort cottage. Three bedrooms, two baths with large screened porch. Five-minute walk to beach, pools, golf (two 18-hole courses), tennis, bicycling, fishing, children's activities. Twenty miles from historic Charleston. \$400/week.

Call 615-865-2558 (days) or 615-847-5969 (evenings).

**RENT MY CONDOMINIUM*
AT
HILTON HEAD ISLAND
SOUTH CAROLINA**

For more information contact:

Tom Reed

Attention: Mrs. Parton

117 East Main Street

Murfreesboro, Tennessee 37130

Telephone: (615) 890-6464

**Ocean Front—2 Bedrooms*

Modern Burn Care Centers Credited With Saving Lives

Severely burned patients are being saved at a higher rate than ever before, and hospitalization periods are being shortened. Improvements in burn care from 1965 to 1979 are tabulated in a report from the National Burn Information Exchange, Ann Arbor, Mich., of 37,442 patients from 120 burn care facilities. Survival ratio of all patients, ranging from only minor burns to severe burns, was 81% in 1965-71, up to 86% in 1972-75, and at the level of 90% in 1976-79.

Extent and severity of the burn plays a major role in survival, the survey shows. But at all levels, the survival record has improved. In the 1960s, only 19% of those burned over 70% to 79% of the body surface survived. In the late 1970s that ratio had climbed to 32%. The gains have come about through a notable increase in interest in the care of the burned patient during the last 35 years.

The survey report offers data to support the contention that the money and effort spent on burn centers and their staffs has paid off in lives saved.

Nation May Face Rationing of Lifesaving Kidney Dialysis

As the nation becomes more and more concerned about the costs of health care, the dilemma arises of how best to utilize limited funds in caring for individuals whose kidneys have failed.

Society may be called upon to decide who qualifies for dialysis, the artificial kidney that can keep the patient alive indefinitely, but at great cost.

Dr. Roger W. Evans of the Health and Population Study Center, Battelle Human Affairs Research Centers, Seattle, points out that in the early years of kidney dialysis, facilities and funds were sharply limited, and local committees were formed to decide who could be kept alive by the machines and who must be left to die. It was a bitter decision, and in 1973 dialysis was included as an extended Medicare benefit to all.

At first this was not too burdensome, but by the end of the 1970s cost had snowballed. More than 50,000 dialysis patients are now being kept alive by the machines, at a cost exceeding \$1 billion a year. The cost probably will exceed \$3 billion by 1984. Since the cost of treatment averages \$30,000 annually per person, very few individuals can afford to pay their own way.

The patient population today is much older than in the early 1970s, and more likely to have other medical problems along with kidney failure, such as diabetes. These individuals are high users of medical services,

and they are less likely to be rehabilitated and return to work.

Before Medicare, many of these patients would not have been selected as candidates for dialysis. Now some people have begun to question whether the present practice of nonselective provision of dialysis can continue. Large numbers of patients with chronic or catastrophic medical conditions are competing for a share of the health dollar. The problem created is how the health care dollar will continue to be apportioned among patients with this and other costly diseases and conditions. It is yet to be decided whether rationing of medical care resources will occur by design or by default.

FAMILY PHYSICIAN NEEDED

Family Physician to join two-man family practice next door to 300-bed hospital. Excellent privileges. Salary guaranteed with fringes and incentives. Partnership at end of second year.

Contact E. P. Dickerson, M.D., Westside Family Physicians, Suite 5500, 2010 59th Street West, Bradenton, Florida 33529, Telephone (813) 792-2211.

PENINSULA HOSPITAL'S 10TH ANNIVERSARY SYMPOSIUM

In conjunction with the 1982 World's Fair
April 28, 29, & 30, 1982

- The Problem Patient
- Depression
- Problems of Adolescence
- Sleep Disorders
- Chemical Dependency

Faculty

G. Douglas Talbott, MD	Roger Goetz, MD
Kenneth O. Jobson, MD	Joe King, MD
D. Steve Goudelock, MD	Bob Booher, MD
James E. Becker, MD	William Anderson, MD

For more information call or write Mrs. Janice Akers, Peninsula Hospital, Louisville, TN 37777, Phone (615) 573-7913 or (615) 983-8216.

*Limited rooms available for grand opening
of 1982 World's Fair on May 1.*

Commentary

Gamboling on the Vegas: The 1981 AMA Interim Meeting

JOHN B. THOMISON, M.D.

As might be deduced from the lateness of this report (it usually appears in the February or at least in the March issue), the AMA Interim Meeting last December in Las Vegas was a rather uninspiring, pedestrian affair, and at times one wondered whether the trip was really necessary. It was. We are practicing in a period of turmoil, when extraneous forces from many sources impinge upon our practice, our patients, and ourselves. Money is short due to inflation, governmental fiscal policies, a relatively high unemployment rate, high interest rates, and a shaky economy, at the same time that public expectations for health are at an all-time high, given the availability of so many sophisticated therapeutic possibilities. There are manpower problems to be dealt with, such as the number and distribution of physicians and the matter of foreign medical graduates, especially U.S. citizens graduating from any of a number of proliferating medical schools, many of them of questionable or even doubtful acceptability.

The spectre of litigation is our constant companion, from the standpoint of both professional liability and "alternative health care" groups who feel they are injured by our exclusiveness.

This spectre frequently prevents our treating our patients in the way we feel to be either the best or the most cost-effective. We are being forced to compete financially with federally or corporately subsidized and often barely competent health care facilities, and in a time when regulation generally is diminishing, we are still caught between schizophrenic governmental agencies. Although it might be an interesting time to observe as an outsider, it is frequently a frustrating and disadvantageous and sometimes downright parlous time in which to be practicing medicine.

All of these situations are brought to the attention of the AMA through resolutions from members and constituent societies. They are grappled with by the councils and the Board of Trustees, whose reports, along with the resolutions, are thoroughly aired in reference committees before final action is taken on the floor of the House of Delegates. All this is necessary, and it takes time and hard work, with countless man-hours of preparatory drudgery by the Board, councils, and staff, to prepare and defend the position of American Medicine before the world. If it is dull and pedestrian, it is at least relatively safe. Fireworks

are indeed more exciting, and there has been a plenty at some of the meetings, but that usually has had the effect not only of increasing the feeling of insecurity of the delegates, but also actually on occasion of imperiling the whole process, and leaving the walls of medicine, organized and otherwise, breached and shaken and in danger of crumbling. Taken on balance, pedestrian is probably better and certainly more restful.

Having perused some other reports of the meeting, various groups pick out for emphasis what they themselves think is important. Since a state journal crosses all lines, I shall try to give these topics equal weight, but at the same time I have personal biases that will make some things more equal than others even though I try to be equally unfair to everyone. Given my own prejudices, the closest thing I spotted to fireworks was over the new "Essentials for Accreditation of Sponsors of Continuing Medical Education," approved last June by the Accreditation Council for Continuing Medical Education (ACCME) and subsequently by all of its member organizations except the AMA.

I shall not enter into a discussion of the whys and wherefores of the document except to say that it could, if improperly applied, drastically affect the continuing medical education process as it now exists at all levels. There is a projected Handbook for Implementation of the new Essentials, which at the time of the meeting was purportedly simply an outline in somebody's head, that would answer all of the as yet unanswered questions about application of the Essentials to specific situations. A Georgia resolution to scrap the whole thing as a bad job, and start over again, gave way after some rather heated discussion in reference committee to the more conciliatory and probably reasonable recommendation by the Council on Medical Education (CME) to approve the Essentials contingent upon subsequent unconditional approval of the Handbook by each ACCME sponsor, including the AMA House. This puts the burden on ACCME to develop the Handbook forthwith; to have done otherwise would have precluded development of the Handbook until new Essentials had been approved.

Until the Handbook, along with the Essentials, is approved, we are still operating under the old Essentials of the AMA Accreditation

Committee, which were subsequently used by the now supplanted LCCME. A lot of us feel these have worked well, and see little need for change except for simplification. The Handbook will prescribe how the Essentials are to be applied to national organizations, medical societies, academic centers, and hospitals that offer continuing medical education programs. The unvarnished Essentials would make it impossible for all but the academic centers to mount an accreditable program, and would make it difficult even for those. The new Essentials are therefore looked on with some apprehension, and will require considerable amelioration in their application. The Essentials, contained in CME Report D, which is published in this issue, also specifies that sponsors of continuing medical education courses advocating unscientific procedures be precluded, and that in order to receive accreditation, a program sponsor must offer instruction in recognized medical subjects that appear in medical school curricula. This necessarily timid declaration is sufficiently diffuse that for practical purposes it has no meaning, since in the long run it excludes no one automatically.

Health manpower is continuing to be one of the thorniest problems with which the AMA has to deal, and in its Report C the Board of Trustees provided the House with a comprehensive analysis of the AMA's policies on health manpower and their relevance to current developments in physician supply, roles of allied health professions, medical education, and health services market. It set forth a series of principles and recommendations for actions to be undertaken by the AMA to address and ameliorate the complex issues relative to making available timely and effective medical services of high quality to persons who seek them. After amending the report fairly extensively, the House adopted it as amended, and referred it to the Board for continuing study of the effect of market forces on physician supply, directing that a further report be submitted at the 1982 Annual Meeting. We will publish the amended Report C of the Board of Trustees in a subsequent issue.

In its Report Z, the Board of Trustees addressed the final report of the Graduate Medical Education National Advisory Committee (GME-NAC), providing the House with background information, a critique of the methodology, and analysis of the assumptions underlying the report, and its recommendations. This report, with minor

amendments made by the House, will be published in a subsequent issue of the JOURNAL, as it is a comprehensive and far-reaching report that will have considerable effect on medical education for the next decade or so.

Examination for medical licensure has been a rather hotly contested issue for some time, having generated considerable strife between the AMA House and the Federation of Medical Licensing Boards, which has been attempting to supplant the National Boards with their own FLEX examination sequence entitled FLEX 1 and FLEX 2. Since I have dwelt on this at some length in previous reports, I will limit this to a summary of what is contained in CME Report B as reported by the AMA in the booklet entitled *Actions Taken by the AMA House of Delegates*, to the effect that "the AMA (1) urge state licensing authorities to continue to recognize the NBME certificate, (2) affirm the recommendations that the medical school faculties continue to exercise responsibilities for evaluating students and housestaff, (3) oppose a licensing examination as a requirement for graduates of educational programs accredited by the LCME entering the first year of graduate training, (4) oppose requirements for licensure requiring a long period of graduate education with the attendant risk of licensure by specialty, and (5) support a single FLEX examination sequence, during or shortly after the first year of graduate medical education."

The matter of competition as it applies to medicine was referred to the Board by the House at the Annual Meeting, and generated Report N of the Council on Medical Service (CMS), which will be subsequently published in the JOURNAL. The report presents a general definition of competition, applies the definition to the market for medical services to determine which elements of competition are either inappropriate or require qualification in the medical context, develops a working definition of competition related specifically to the market for medical services, and examines the effects of increased competition in the medical marketplace. The Council finds that the Association's current policies support a medical services market with increased emphasis on cost effectiveness as long as that emphasis is balanced by a strong sensitivity to safeguarding the nation's access to high quality medical care. It does not, however, address the matter of what was considered by many of the delegates to be unfair competition

by operations subsidized by either the federal or local governments or corporations, specifically hospitals, which generated some extended discussion both in reference committee and on the House floor. This includes freestanding emergency satellite clinics, which although legally established, are nonetheless frequently substandard operations staffed by nurse practitioners and physician's assistants even while being reimbursed by third party payers for physician's services. The AMA, as well as its constituent societies, finds itself in the position of being found in restraint of trade if it attempts to limit these activities, and a report of the Board to that effect was returned to the Board with instructions that if they cannot be limited, they should at least be required not to jeopardize medical care by offering inferior service. There should be statutory requirements that these clinics meet the same standards as all other health care facilities.

Through its CMS, the AMA continues to monitor HMOs, particularly as to the quality, cost, and accessibility of care. Federal funding for these operations, of which as of June 30, 1981, there were 251, with a total enrollment of 10.1 million individuals, is at a substantially lower level than previously, and private investment is becoming increasingly important. Private investors, including commercial insurers, health care management and consulting firms, and corporate employers, appear willing to take over and operate some of the failing HMOs if they can be converted to for-profit operations, and if the Department of Health and Human Services (DHHS) would be willing to renegotiate the repayment of federal grants and loans. This will likely happen, as the department sees financial settlement as being beneficial to the federal government, instead of allowing an HMO to fail, with full loss of the loan investment. Blue Cross and Blue Shield plans have been quite active in expanding HMO development over the past year. Although the indications are that HMOs may provide care at a lower total cost, varying factors in direct health care delivery systems do not permit an absolute, direct cost comparison between HMOs and traditional practice situations, and in adopting Report D of the CMS, the House requested it to study the issue of how apparent HMO cost savings may affect the total cost of health care to the community.

It should be kept in mind in thinking about HMOs that in addition to the two traditional types, the staff model HMO, which directly em-

ploys physicians, and the group model HMO, in which the physicians are members of the partnership or a service corporation which contracts with the HMO to provide services to members at a predetermined capitation, there is a third type referred to as the Individual Practice Association (IPA). The IPA is a physicians' organization which provides services to HMO enrollees. The HMO pays the IPA a capitation, and IPA in turn pays its member physicians on a fee-for-service basis. IPA physicians work in their own offices, where they serve both HMO members and fee-for-service patients. IPAs are gaining in popularity, but suffer from some of the same problems that the other types of HMO do.

With the phasing out of the professional services review organizations (PSROs), emphasis has been placed on voluntary medical peer review. This is of course something that hospital staffs, as well as physicians individually, have always engaged in to some extent, although perhaps not to the extent that they should have. Mandated peer review was a federal reaction more to perceived than to actual dereliction, but we nevertheless need to insure that this perception does not recur and lead to even more stringent regulation.

At the 1981 Annual Meeting, the House adopted a resolution calling for the AMA to take leadership in promoting effective means of physician assessment of the quality of medical care. The Council has accordingly developed a set of principles for voluntary medical peer review that it believes should be found in any organization or system that has as its objective the assessment of the quality of medical care. These are contained in CMS Report A, which we will publish subsequently. In its conclusions to the report the Council recognized peer review as a complex, multifaceted process requiring different approaches in individual communities, and that these principles are intended as a reference point in the design of such a system. The Council intends to continue developing such materials and assisting physicians in their responsibilities for peer review.

For over three years representatives of the AMA have been meeting with representatives of other health care providers and business and industry groups to discuss common concerns related to the delivery of health care, and has been encouraging and assisting with similar discussions

at a local level. Through these discussions, the concept of coalitions for health care has developed through cooperation of the AMA with the American Hospital Association, the Blue Cross-Blue Shield Association, the Business Round Table, the Health Insurance Association of America, and the American Federation of Labor and Congress of Industrial Organizations. With a view toward supporting such coalition activities at the local level, the House adopted Report VV of the Board of Trustees, entitled Coalitions for Health Care. This is a short report, which we will publish in the JOURNAL, with the end in mind of improving cost and delivery of health care by such things as replacing expensive inpatient care with ambulatory and home care, and an associated redesign of insurance benefits to emphasize preventive, primary home care to increase access to care through efforts to finance and provide health care for the unemployed and others who do not have such access; to increase opportunities to discuss and develop the most cost-effective and equitable forms of provider payment; and to develop more effective programs of health promotion and disease prevention at the work place.

As usual, the Council on Scientific Affairs (CSA) came up with a number of significant reports. In the past, we have published a number of these, but as they are now being published regularly under copyright in the *Journal of the American Medical Association*, we will reprint them by permission only in certain individual circumstances and on a space available basis. Under no circumstances will we ever publish them before they appear in *JAMA*, and should you wish to know more about them, I refer you to that publication.

There is a comprehensive study on the health effects of "agent orange" and dioxin contaminants (CSA Report A), which includes a background statement on the chemical, the biologic effects on organs and cells and in man, and current studies under way. The Council recommends that studies on exposed, or allegedly exposed, persons continue to be supported, and if feasible, enlarged to include cooperative engagement of all internationally known exposure data. It further recommends that all physicians be alerted to the classical signs of chloracne and the possible signs of adverse effects of exposure to the agent. They should be encouraged to enlist in the present efforts to identify and treat those

persons who have had serious exposure, and to cooperate in the collection of vital information needed for ongoing human epidemiologic studies.

Chloracne is the clinical marker of exposure to agent orange and dioxin contaminants, and is typified by comedones in a malar distribution, the pre- and post-auricular portions often being accompanied by hirsutism and sometimes by melanosis and a secondary inflammation. Other evidence of acute toxic reaction to dioxin include liver and renal damage, porphyria cutanea tarda, hyperpigmentation, hirsutism, polyneuropathies such as sensory impairments and weakness in the lower extremities, and neurasthenic or depressive syndromes.

There are excellent reports on genetic counseling and prevention of birth defects (CSA Report B), the health care needs of the homosexual population, including diseases common to this group (CSA Report C), and a discussion of whether these needs are being unmet as well as reasons why this might be so. There is also an extensive discussion entitled "Periodic Medical Evaluation—Review and Recommendations" (CSA Report E), another entitled "Dimethylsulfoxide: Controversy and Current Status" (CSA Report F), and one on the use of tranquilizers and antidepressants in young women (CSA Report D).

In a report entitled "Estrogen Replacement in the Menopause—1981" (CSA Report G), the status of replacement therapy with this drug is given a full discussion. It discusses the benefits of estrogen therapy, which include relief of vasomotor flushes, vaginal atrophy, and osteoporosis, as well as the possible ameliorating effects on atherosclerosis and consequent myocardial infarction, relief of psychogenic disturbances, and improvement in emotional stability and tissue tone. It then speaks of the risks of estrogen therapy, including endometrial cancer, abnormal uterine bleeding, and other adverse effects such as increased incidence of gallbladder disease, possible thromboembolic disease, benign hepatic adenomas, hypertension, and glucose intolerance. It discusses the various estrogen preparations available, and concludes with a section on relative risk assessment, in which it points out that as with any drug, the risk of using it must be balanced against the risk of not using it, in this instance the possibility of uterine bleeding, the desirability of annual endometrial cytologic or

histologic evaluation, and what the report characterizes as the dubious and remote hazard of uterine cancer at some later date, as opposed to the nuisance and embarrassment of hot flashes, a compromise of vaginal secretions, the risk of myocardial infarction, and the risks of osteoporosis. The Council recommends (1) that estrogens be utilized only for responsive indications, in the smallest effective dose, and for the shortest period that satisfies therapeutic need, (2) that treatment be initiated with a low dose of oral estrogen and a topical preparation be used if atrophic vaginal symptoms are present, (3) that it be administered cyclically to women with intact uteri to avoid continuous stimulation of the endometrium, (4) that any abnormal vaginal bleeding be investigated promptly, with yearly monitoring of asymptomatic patients, to include histologic and cytologic sampling, and (5) that as with all therapeutic decisions the patient be allowed to participate by discussing with her the risks and benefits involved in her particular case.

As usual, tobacco and alcohol and their use came under scrutiny and attack, with a recommendation that publication of the adverse health effects resulting from their use be continued, that publishers of major newspapers and magazines be urged to decline publication of advertisements, that the public, including appropriate governmental agencies and the Congress, be educated as to the staggering costs of days lost from work and the illnesses that result from the use of alcohol and tobacco products. Finally, support was expressed for a per package increase in the federal cigarette excise tax. As a substitute for a resolution calling for strict regulation of the manufacture, sale, importation, distribution, and licensing of handguns, the House adopted a resolution "that the American Medical Association supports strict enforcement of present federal and state gun control legislation and the imposition of mandated penalties by the judiciary for crimes committed with the use of a handgun."

Report DD of the Board of Trustees, entitled "Physician and Public Education on the Medical Consequences of Thermonuclear Warfare," which we will subsequently publish, is a short report adopted by the Board recommending that the AMA inform the President and Congress of the medical consequences of nuclear war, which are such that no adequate medical response is possible. The report calls for the AMA to prepare material for physician and public education

AMA HOUSE ACTIONS/Thomison

on the subject and to cooperate with other health care organizations and authorities in regard to medical and health care during national emergencies. The report further states that AMA should not become involved in the political issues of nuclear war, since these are outside the Association's professional expertise.

In some housekeeping items, six new specialty societies, the American Association of Clinical Urologists, the American College of Nuclear Physicians, the American Orthopaedic Association, the American Society of Gastrointestinal Endoscopy, the American Society of Therapeutic Radiologists, and the Association of Life Insurance Medical Directors of America were granted representation in the House. The House opened the meeting with 282 delegates, 61 of them specialty society representatives, and as a result of AMA increases from bylaw revisions of the component societies affecting membership status of residents and medical students there may be as many as 20 additional delegates representing state medical associations in 1982. At the last Annual Meeting, the House declared a moratorium on additional specialty society representation until a study of the entire matter of delegation selection could be effected, but the six additional members were admitted because they had applied for membership before the moratorium was passed.

Many other actions were taken by the House, and these have been extensively reported previously in various places, including *AM News*.

With the large number of additional resolutions and reports that were either not adopted or were referred to the Board of Trustees for further study, it made for a busy time, and in a way makes moot the call previously made by the Board of Trustees to consider either eliminating the interim meeting or shortening both meetings.

In the eyes of the world the AMA speaks as the voice of American Medicine, whether or not you personally wish it so. It speaks through its House of Delegates, but in the interim, through necessity it speaks through its Board, or even the Executive Committee of the Board, through its president, and through its EVP. They all try to be careful to reflect the will of the House in their statements, although like the rest of us they sometimes fail, and as do the rest of us, often seek to shape the will of the House in their own image. There is seldom consensus, but as the most democratic of all organizations, including our government at all levels, any individual voices will be heard if not always heeded. As the voice of American Medicine, the AMA needs to be and to remain strong, and to do that requires that the voice of every single American physician be added either to the majority which speaks, or to the loyal opposition. A conspiracy of silence or nonparticipation will only weaken the position of American Medicine, and through it the position of each of us; that will ultimately work to the harm of our patients and the destruction of medicine as a profession and a scholarly pursuit. That is all our enemies and detractors could ever wish for.

POETRY ASSOCIATION FOR PHYSICIANS

The American Physicians Poetry Association has been formed in order to give physician poets a forum in which to exchange views and ideas.

The Association suggests that you join and send your poems for consideration for publication in its journal. The dues are \$10 annually.

For further information contact Richard A. Lippin, M.D., 230 Toll Drive, Southampton, PA 18966.

Transsphenoidal Microsurgery of Pituitary Tumors

JAMES T. ROBERTSON, M.D. and J. KENYON RAINER, SR., M.D.

Surgical disease of the pituitary gland is well known to neurological surgeons. Syndromes of acromegaly, gigantism, amenorrhea-galactorrhea in women; loss of libido, gynecomastia and galactorrhea in men, Cushing's disease, and Nelson's syndrome are with the refinements of the transsphenoidal approach to the pituitary gland now more easily treated surgically. This approach, introduced by Schloffer in 1907,¹ was refined by Cushing,² but later abandoned due to poor visualization and the high incidence of cerebrospinal rhinorrhea and meningitis. Recent reports by Vezina et al³ and Wilson and Dempsey⁴ have demonstrated the effectiveness of this approach in the treatment of pituitary disease. This communication reports the experience of one of us (J.T.R.) in the transsphenoidal microsurgical treatment of 100 pituitary tumors.

Clinical Material and Methods

From September, 1975, to July, 1979, 100 patients underwent transsphenoidal microsurgical removal of pituitary tumors. Eighty-eight patients were female and 12 were male, with ages ranging from 11 to 71 years.

Presenting signs and symptoms are summarized in Table 1. Amenorrhea or irregular menses was the most common complaint followed by galactorrhea. Headache, although a frequent complaint, was not specific for pituitary disease. Weight gain was seen in approximately 40% of patients. Less common complaints were change in libido and breast size. Visual loss, including partial and complete bitemporal hemianopsia and optic atrophy, although not a

TABLE 1
SIGNS AND SYMPTOMS

Amenorrhea or irregular menses	68
Galactorrhea	55
Headache	52
Weight gain	42
Change in libido	24
Change in breast size	16
Visual loss	10

TABLE 2
DIAGNOSTIC STUDIES

	Normal	Abnormal	Not Done
Skull x-rays	72	28	0
Tomograms	40	35	25
Arteriogram	18	12	70
CT scan	5	10	85
Pneumoencephalogram	8	7	85

frequent sign, was highly localizing for sellar and parasellar pathology.

Preoperative laboratory evaluation included thyroid function studies T3 and T4, serum thyroid stimulating hormone (TSH), serum luteinizing hormone (LH), serum follicle stimulating hormone (FSH), serum growth hormone, morning and evening serum cortisols, serum prolactin, serum estradiol, serum testosterone, serum androstenedione, and metapyrone suppression test.

Diagnostic studies are summarized in Table 2. Plain skull x-rays were usually normal, but were abnormal frequently often (28%) to justify their cost. Polytomograms defined more abnormalities. Cerebral arteriography was not routinely used.

Technique

A standard transsphenoidal approach to the pituitary gland as previously described⁵ was used

Dr. Robertson is with the Department of Neurosurgery, University of Tennessee Center for the Health Sciences, Memphis. Dr. Rainer is in the private practice of neurosurgery in Memphis.

Reprint requests to Department of Neurosurgery, UT Center for the Health Sciences, 66 N. Pauline, Memphis, TN 38105 (Dr. Robertson).

in all patients. Routine preoperative steroids and antibiotics were not used. Postoperative antibiotics were used only when the subarachnoid space had been entered. Vasopressin was not used for the first 24 hours postoperatively.

Results

Surgical pathology is reported in Table 3. Chromophobe adenoma was the most common tumor type encountered, but all morphological types were identified. Physiological tumor classification is recorded in Table 4. There were no operative mortalities, and operative morbidity is summarized in Table 5. Transient diabetes insipidus, an increase in urinary output associated with normal levels of antidiuretic hormone, usually cleared in 24 to 48 hours without administration of vasopressin. Two patients with cerebrospinal rhinorrhea required operation for repair of the leak. Visual disturbances occurred in two patients, one, a transient diplopia, and the other, a lateral rectus palsy. Four of the cases of meningitis were aseptic, and one purulent meningitis secondary to *Klebsiella pneumoniae*. Recurrences are summarized in Table 6. The one negative exploration was later discovered to have a strongly positive history of phenothiazine usage.

Discussion

Hypersecretion syndromes are currently the most commonly recognized pituitary pathology. As reported by Wilson and Dempsey⁴ in a series of 250 pituitary microadenomas, 71% were hypersecreting, and 29% were nonsecreting. Of the hypersecreting syndromes, prolactin secreting pituitary adenomas are the most frequently diagnosed functional pituitary neoplasms, and represent about 25% of all pituitary tumors.^{6,7} Preoperative evaluation of hypersecretion syndromes should include serum FSH, LH, TSH, T3, T4, plasma cortisols, growth hormone, ACTH, gonadotrophin reserve, prolactin sup-

pression with L-dopa, skull x-rays, and tomograms. Although indicated, these studies may be normal⁸ in spite of verifiable pathology. The work-up of nonsecreting syndromes is essentially similar but may also require computed tomography (CT) scan, arteriography, and occasionally pneumoencephalography. Polytomography is more specific than plain skull films, although abnormal tomograms provide no information as to tumor histology.⁹

The excellent results reported in the treatment of amenorrhea-galactorrhea syndromes¹⁰

TABLE 3
HISTOLOGIC CLASSIFICATION OF TUMORS

Chromophobe adenoma	45
Acidophilic adenoma	2
Basophilic adenoma	5
Eosinophilic adenoma	12
Mixed	3
Type not identified	21
Pituitary cyst	2
Other	10

TABLE 4
PHYSIOLOGIC CLASSIFICATION OF TUMORS

Prolactin secreting adenoma	58
Growth hormone secreting adenoma	17
ACTH secreting adenoma	10
TSH secreting adenoma	0
GTH (gonadotrophic) secreting adenoma	0
Nonsecreting	15

TABLE 5
POSTOPERATIVE COMPLICATIONS

Cerebrospinal fluid rhinorrhea	5
Transient diabetes insipidus	15
Permanent diabetes insipidus	3
Visual disturbance	2
Meningitis	5
Tumor recurrence	13
Negative exploration	1

TABLE 6
TUMOR RECURRENCES

Prolactin secreting adenomas	8	Chromophobe adenomas	7
Growth hormone secreting adenomas	4	Eosinophilic adenomas	3
ACTH secreting adenomas	1	Acidophilic adenomas	1
Nonsecreting	0	Unidentified	2

TABLE 7
FOLLOW-UP OF PITUITARY TUMORS*


Periods returned	53 of 58 prolactin secreting adenomas	(91%)
Pregnant	21 of 58 prolactin secreting adenomas	(36%)
Abnormal pituitary function	17 of 100 pituitary tumors	(17%)
Headaches	29 of 100 pituitary tumors	(29%)
Visual symptoms	18 of 100 pituitary tumors	(18%)
Milk in breasts	5 of 58 prolactin secreting adenomas	(0.9%)
Remote meningitis	1 of 100 pituitary tumors	(1%)
Loss of libido	2 of 100 pituitary tumors	(2%)

*81% of patients followed 3 months to 12 years.

and in the treatment of Cushing's disease¹¹ should prompt extensive evaluation of these patients. Chang et al¹⁰ showed resolution of amenorrhea in 18 of 24 patients and resolution of galactorrhea in 19 of 24 patients with low morbidity. Tyrrell et al¹² showed correction of hypercortisolism in 17 of 20 patients, and 16 of 18 in the Salassa et al¹¹ series. Table 7 summarizes the follow-up in this series and demonstrates comparable results to others reported in the literature, low morbidity, and verifiable pathology, adding support to the surgical management of pituitary disease.

Summary and Conclusions

The work-up of patients with suspected pituitary pathology is quick, cost-effective, and noninvasive in most cases. In classical syndromes such as amenorrhea-galactorrhea, serum hormonal levels combined with polytomography of the sella may be sufficient preoperative evaluation if pitfalls such as hypothyroidism and phe-

nothiazine drug usage are excluded. Morbidity is low and readily manageable. Transsphenoidal surgical management of these diseases may be confidently recommended to the patient. 

REFERENCES

- Schloffer H: Erfolgreiche operation eines hypophysentumors auf nasalem wage. *Wein Klin Wochenschr* 20:621-624, 1907.
- Cushing H: Disorders of the pituitary gland, retrospective and prophetic. *JAMA* 76:1721-1726, 1921.
- Vezina JL, Sutton TJ, Maltais R, et al: Prolactin secreting pituitary microadenomas. *Acta Radiologica*, suppl 347, 1975.
- Wilson CB, Dempsey LC: Transsphenoidal microsurgical removal of 250 pituitary adenomas. *J Neurosurg* 48:13-22, 1978.
- Nielson KD, Clark K: Transsphenoidal microsurgery for selective removal of functional pituitary microadenoma. *Tex Med* 72:61-66, Nov 1976.
- Nasr H, Mozaffarian G, Pensky J, et al: Prolactin secreting pituitary tumors in women. *J Clin Endocrinol Metab* 35:505-512, 1972.
- Pearson OH, Brodkey JS, Kaufman B: Endocrine evaluation and indications for surgery of functional pituitary adenomas. *Clin Neurosurg* 21(0):26-38, 1974.
- Wiebe RH, Hammond CB, Borchert LG: Diagnosis of prolactin secreting pituitary microadenoma. *Am J Obstet Gynecol* 126:993, 1976.
- Robertson WD, Newton TH: Radiologic assessment of pituitary microadenomas. *Am J Roentgenol* 131:489-492, 1978.
- Chang RJ, Keye WR, Young JR, et al: Detection, evaluation, and treatment of pituitary microadenomas in patients with galactorrhea and amenorrhea. *Am J Obstet Gynecol* 128:356, 1977.
- Salassa RM, Laws ER, Carpenter PC, et al: Transsphenoidal microsurgical removal of pituitary microadenoma in Cushing's disease. *Mayo Clin Proc* 53:24-28, 1978.
- Tyrrell JB, Brooks RM, Fitzgerald PA, et al: Cushing's disease, selective transsphenoidal resection of pituitary microadenomas. *N Engl J Med* 298:753-758, 1978.

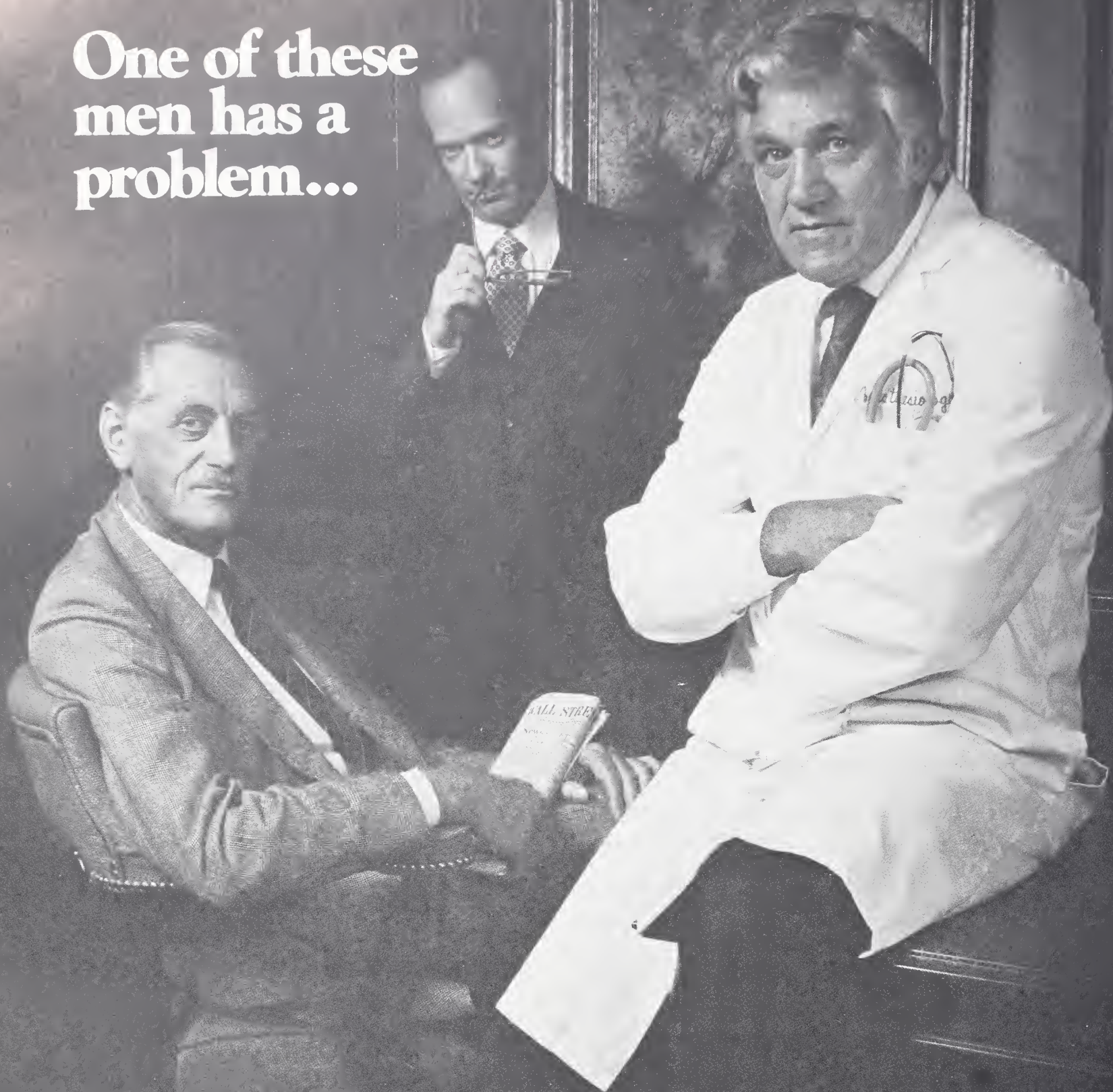
Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

**One of these
men has a
problem...**



and so do his family and colleagues.

There are special considerations in the treatment of professionals and executives who are impaired through dependency on drugs or alcohol: not because the patient or his addiction is different from others, but because of the strict sanctions imposed by the public and professional communities.

The A & D Center specializes in the treatment of the professional or executive who is chemically dependent. Treatment at the Center is designed to provide complete medical and counseling services, with care, dignity, and confidentiality for the patient. Family care and aftercare are emphasized, and specific plans are made for the re-entry process.

The A & D Center, located at the modern, 162-bed Doctors Hospital in Jackson, offers a 96-hour evaluation program, with the total inpatient treatment program extending for thirty days. For further information on the A & D Center, contact:



Doctors Hospital A & D Center
2969 University Drive
Jackson, Mississippi 39216
(601) 982-8321

Essentials for the Accreditation of Sponsors of Continuing Medical Education

The Accreditation Council for Continuing Medical Education (ACCME) during its June 25, 1981, meeting adopted a statement of the Essentials for the Accreditation of Sponsors of Continuing Medical Education. The bylaws of the ACCME provide that any new Essentials or modifications of the Essentials are subject to approval by each of the sponsoring organizations.

The proposed Essentials, as follow, supercede the Essentials for Accreditation of Institutions and Organizations offering Continuing Medical Education Programs previously used by the AMA Committee on Accreditation of Continuing Medical Education (CACME) and the Liaison Committee on Continuing Medical Education (LCCME).

The Council on Medical Education and its Continuing Medical Education Advisory Committee have reviewed the recommended Essentials and have asked for and received comments from state medical associations and specialty societies represented in the House of Delegates.

These comments have been considered by the Council on Medical Education and its Continuing Medical Education Advisory Committee in formulating a recommendation to the House of Delegates.

The ACCME intends to prepare a companion document to the Essentials, a Handbook for Implementation. This Handbook will include suggested activities and examples which can be used in various continuing medical education settings (medical schools, hospitals, specialty societies, etc.) to assist a sponsor in complying with the Essentials.

ACCME ESSENTIALS FOR THE ACCREDITATION OF SPONSORS OF CONTINUING MEDICAL EDUCATION

Introduction

The Accreditation Council for Continuing Medical Education (ACCME) conducts a voluntary accreditation program for institutions and organizations providing continuing medical education (CME). By evaluating and granting recognition to an institution or organization whose CME program substantially com-

plies with standards or Essentials, the ACCME seeks to improve the quality of CME and to assist physicians in identifying CME programs which meet these standards.

The ACCME recognizes that the professional responsibility of physicians requires continuous learning throughout their careers, appropriate to the individual physician's needs. The ACCME also recognizes that physicians are responsible for choosing their own CME and evaluating their own learning achievement. The Essentials, therefore, are designed to encourage and foster self-directed physician participation in CME, in which the physicians assume full responsibility for the choice of their CME activities in accordance with their perceived needs, individual preferences of learning methods, and practice settings. Sponsors should take into consideration the needs and interests of potential physician participants in planning their CME activities, and encourage these physicians to assume active roles in the planning process.

In the Essentials the ACCME has identified certain elements of organization, structure, and method which appear to contribute significantly to the development of effective CME. They are presented here in the Essentials for Accreditation of Sponsors of Continuing Medical Education (Essentials) and in the planned Handbook for Implementation. The Essentials are made up of those requirements which a sponsor must substantially meet for accreditation. An explanation and rationale are also provided. The Handbook will include suggested activities and examples which can be used in various CME settings (medical schools, hospitals, specialty societies, etc.) to meet the Essentials. The Essentials and the Handbook should prove valuable as resources for physicians planning their own CME and for sponsors designing CME programs.

The ACCME will review the Essentials and the Handbook on a continuing basis, and will modify them as knowledge and experience dictate.

It is important to note that the ACCME does not accredit individual CME activities, but institutions and organizations for their overall program of CME. The overall program consists, at least in part, of one or more educational activities, developed according to these Essentials, which provide direct teacher-participant interaction.

The following definitions will be useful in reviewing the Essentials and the Handbook, and in gaining an

This is AMA Council on Medical Education Report D, submitted to the House of Delegates at its Interim Meeting in December, 1981. Past House Action: I-80:72-85.

understanding of the accreditation process:

- *Continuing Medical Education (CME)*: Continuing Medical Education consists of educational activities which serve to maintain, develop, or increase the knowledge, skills, and professional performance and relationships that a physician uses to provide services for patients, the public, or the profession. The content of CME is that body of knowledge and skills generally recognized and accepted by the profession as within the basic medical sciences, the discipline of clinical medicine, and the provision of health care to the public.

- *The Purpose of CME Accreditation*: To assure physicians and the public that CME activities meet accepted standards of education.

- *CME Accreditation*: The recognition accorded eligible institutions and organizations which meet the Essentials.

- *Program of CME*: The overall CME program of a sponsor consists of one or more educational activities consistent with the Essentials.

- *CME Activity*: A coherent educational offering which is based upon defined needs, explicit objectives, educational content, and methods.

- *A Sponsor*: An institution or organization assuming responsibility for CME.

- *A Participant*: A physician engaged in CME.

- *The Essentials*: The document which provides information regarding the ACCME accreditation and the standards which must be substantially met for a sponsor of CME to be accredited.

- *The Handbook for Implementation*: Suggested activities and examples to assist a sponsor in meeting the Essentials.

Eligibility for Accreditation

To be eligible for accreditation, a sponsor must offer a program of continuing professional education for physicians in the delivery of health care. An organization is not eligible to apply for accreditation if, in the judgment of the ACCME, its program is devoted to advocacy of unscientific modalities of diagnosis or therapy.

The Essentials

The following seven Essentials comprise the criteria, or standards, by which eligible sponsors of CME are evaluated in order to determine their qualification for accreditation by the ACCME. When it becomes available, the Handbook for Implementation should be consulted for further elaboration.

Essential #1

The sponsor shall have a written statement of its CME mission, formally approved by its governing body. The mission statement shall (1) describe the goals of the overall CME program in a concise manner, (2) indicate the scope of the CME effort, (3) outline the characteristics of the potential participants, (4) describe the general types of activities and services provided.

Explanation and Rationale—In order to provide quality CME, it is essential to have a written mission statement which has been agreed upon by the governing body. This statement outlines what is expected

of the CME organization and serves as a basis for a more objective evaluation of its ability to meet its mission. Without such a document, there may be misunderstandings as to the scope and nature of the CME activities undertaken. With an agreed-upon mission statement, the CME organization can more easily seek needed support from its governing body to accomplish its required functions.

Essential #2

The sponsor shall have established procedures for identifying and analyzing CME needs and interests of prospective participants. The sponsor shall (1) document the processes used to identify CME needs, including data sources which go beyond the sponsor's own perception of needs; (2) state the overall needs identified by the above processes and indicate how this assessment is used in planning educational activities.

Explanation and Rationale—Identification and analysis of CME needs (needs assessment) provides the basis for formulating educational objectives and planning educational activities. Needs assessment results in a statement specifying instructional intent and/or expected learning outcomes. Needs may be perceived and/or identified by both the physician participant and the sponsor. Setting priorities for identified needs will assist the sponsor in planning educational activities.

Essential #3

The sponsor shall have explicit objectives for each CME activity. The sponsor shall (1) state the educational need(s) which the individual activity addresses; (2) indicate the physicians for whom the activity is designed; (3) list any special background requirements of the prospective participants; (4) highlight the instructional content and/or expected learning outcomes in terms of knowledge, skills, and/or attitudes; (5) make these objectives known to prospective participants.

Explanation and Rationale—Clearly stated objectives provide prospective participants with a realistic understanding of the nature and purpose of the CME activity. This allows prospective participants to select educational activities which meet their needs. It also helps sponsors to target educational activities to meet explicit needs. A CME activity which takes place over a period of time, e.g., weekly grand rounds, may be covered by a single set of objectives.

Essential #4

The sponsor shall design and implement educational activities consistent in content and method with the stated objectives. The sponsor shall (1) design and implement educational activities responsive to the characteristics of prospective participants, such as knowledge levels, professional experience, and preferred learning styles; (2) document use of systematic planning procedures; (3) make educational content and methods known to prospective participants.

Explanation and Rationale—After the identified needs have been translated into explicitly stated educational objectives it is important to design and implement educational activities in a way that facilitates meeting the objectives. The selection and organization

of content, and decisions about educational formats, methods, media, and faculty should be based upon what seems most effective and efficient in meeting these objectives. These same elements pertain to sponsored CME activities which provide information and assistance to physicians engaged in self-directed learning.

Essential #5

The sponsor shall evaluate the effectiveness of its overall CME program and component activities and use this information in its CME planning. The sponsor shall (1) periodically review the extent to which the sponsor's CME mission is being achieved by its educational activities; (2) show that these evaluations assess (a) the extent to which educational objectives are being met, (b) the quality of the instructional process, (c) participant's perception of enhanced professional effectiveness; (3) use evaluation methods which are appropriate and consistent in scope with that educational activity; (4) demonstrate that evaluation data are used in planning future CME activities.

Explanation and Rationale—The systematic gathering of evaluation data and their analysis, including evaluation of individual CME activities, is necessary for the sponsor to assess the degree to which the overall program fulfills its CME mission. It will also guide the planning of future activities and permit rational decisions about improving the educational program.

Essential #6

The sponsor shall provide evidence that management procedures and other necessary resources are available and effectively used to fulfill its CME mission. The sponsor shall (1) document an organizational structure for CME and its administration, designating an entity responsible for CME and delineating its authority; (2) identify responsible individuals who will maintain continuity of administration; (3) describe an internal review and control procedure, including budgetary practices, to ensure effective utilization of resources in fulfilling the CME mission; (4) provide a budget for the overall CME program and its major components; (5) utilize competent faculty; (6) provide appropriate facilities for CME programs; (7) have mechanisms to record and, when authorized by the participating physician, to verify participation.

Explanation and Rationale—Whether sponsors of CME are large or small, adequate management and control are necessary to assure quality educational

activities. In addition, adequate resources must be available in order for CME activities to be relevant, effective, and efficient for physicians.


Essential #7

The sponsor shall accept responsibility that the Essentials are met by educational activities which it jointly sponsors with nonaccredited entities. The sponsor shall (1) provide evidence that it participates integrally in the planning and implementation of each jointly sponsored CME activity; (2) conduct an evaluation of each jointly sponsored CME activity.

Explanation and Rationale—An accredited sponsor may be asked by organizations which are not accredited to jointly sponsor CME activities, so they may have accredited sponsorship. When an accredited sponsor agrees to joint sponsorship it must provide assurance that the Essentials are met.

Council on Medical Education Recommendations

The introduction to the proposed Essentials includes a statement headed "Eligibility for Accreditation." This statement would require the ACCME to determine if modalities of diagnosis or therapy are unscientific. Because a norm is required for such a determination, the following substitute is proposed: "To be eligible for accreditation, a sponsor must offer a program of continuing professional education for physicians. An organization is not eligible to apply for accreditation if its program is devoted solely to advocacy of a modality of diagnosis or treatment which is not a subject for instruction in medical schools whose programs of medical education are accredited by the Liaison Committee on Medical Education."

The Council on Medical Education has concluded that the Handbook will be an integral companion to the Essentials and will be of equal importance in its effect. Therefore, the Council on Medical Education recommends that the proposed Essentials, with the above substitution, be approved contingent upon approval by the sponsors of the ACCME of the intended Handbook and of revisions of the Handbook which may be recommended by the ACCME. The current Essentials will be utilized in the accreditation process until the new Essentials and the proposed Handbook for Implementation have been unconditionally approved by each sponsor of the ACCME. Such approval requires favorable action by the AMA House of Delegates. 

Electronic Fetal Monitoring

Introduction

During the past two decades, there has been a significant decrease in perinatal mortality. There has also been a concomitant increase in the use of technology in monitoring of pregnancies, as indicated by the use of continuous electronic fetal monitoring (EFM) during labor in as many as 60% to 70% of pregnancies.^{1,2}

This trend in the increasing use of EFM has been associated with opposing societal forces which include: (1) an increased emphasis on the "natural" birthing process in which any intervention is viewed with concern, (2) a greater demand for demonstrated efficacy of common practices as well as new technologies, and (3) a greater emphasis on cost/benefit and cost/risk analysis.

Challenging the use of EFM most dramatically was a report by David Banta and Stephen Thacker³ that was given unusually wide play in the lay press. This study related the increase in cesarean section rates to the greater use of EFM. Following its release, there ensued a considerable amount of debate and strong rebuttal from experts in the field.

Because of the continuing dispute and confusion, primarily among those not directly involved in obstetrical care, the Council on Scientific Affairs decided that it would be desirable for the Council to prepare a report on the subject. An advisory panel of consultants was formed that included physicians representative of the speciality societies with direct involvement in labor and delivery. The following statement is the report of that panel as adopted by the Council on Scientific Affairs.

Direct electronic fetal heart rate monitoring, with or without scalp pH determinations, is one of a number of ways of assessing intrapartum fetal distress. Two other methods are indirect EFM and auscultation of the fetal heart rate. Each will be subsequently discussed, pointing out what is known about its benefits and limitations.

It should be emphasized that each is an adjunct to professional care and not a replacement. However, before specific details of each method are delineated, intrapartum fetal assessment needs to be placed in perspective.

This is Council on Scientific Affairs Report H. This report is not intended to serve as a standard of medical care: standards of medical care which are determined locally and are constantly subject to change are established on the basis of all the several facts of the individual case.

Reproduced with permission from *JAMA* (246:2370-2373, Nov. 20, 1981). Copyright 1981, American Medical Association.

Perinatal Morbidity

Intrapartum fetal hypoxia from a variety of sources, as well as postpartum events and genetic factors, may produce, among other things, respiratory distress syndrome, renal dysfunction, neurological damage—both subtle and severe (cerebral palsy and severe mental retardation)—and death. Although intrapartum events can potentially increase respiratory distress syndrome, renal damage and subtle neurological damage, there is not enough data to make numerical correlations.

There is a prevalence rate of 2.0-2.5/1,000 live births for cerebral palsy. Although the strong association of cerebral palsy with low birth weight makes interpretation of the role of intrapartum hypoxia particularly difficult, a recent report estimates that 20% to 40% of cerebral palsy is attributable to intrapartum factors.⁴ Therefore, the maximum benefit to be achieved from early recognition of hypoxia would be a reduction of 0.4-1 cerebral palsy victims per 1,000 births or 1,200-3,000 per annum in the United States.

Several studies have estimated that 10% of severe mental retardation may be due to perinatal events.⁵⁻⁷ Since the prevalence rate is approximately 3.5/1,000 live births, prevention of perinatal events that contribute to severe mental retardation might prevent as many as .35/1,000. How many of these are due to intrapartum hypoxia cannot be determined at this time.

Perinatal Mortality

In the decade between 1967 and 1976, there was a steady decline in stillbirths and neonatal mortality in the United States.¹ Stillbirths went from 15.2/1,000 births to 10.3/1,000 births, a decline of 32%. Neonatal mortality declined 37%, from 17.2/1,000 live births to 10.9/1,000 live births. Perinatal mortality, which is the sum of these two, fell 35%, from 32.4/1,000 to 21.2/1,000.

Alberman,⁸ in tabulating data from Britain for the year 1971, found that 29% of perinatal deaths were caused by intrapartum events. This, however, may not be the upper limit of the benefits of fetal monitoring since fetal distress and hypoxia could play a contributing role in many of the other listed causes of death—prematurity, for example.

Assessment of Fetal Distress

Examination of the neonate to assess its health status has obviously been done since time immemorial. This assessment has become more uniform with the use of Apgar scores which place numerical weights on

five parameters of cardiovascular, respiratory and neurological well-being of the infant. Although it is a good predictor of short-term health status, it remains to be seen how well the Apgar score correlates with long-term mortality and morbidity.

Because advances in medical technology increase the ability to successfully intervene in circumstances of fetal distress, there has been increasing pursuit of ways to detect fetal distress as early as possible. In recent years, the use of continuous EFM has been replacing observation for meconium staining and fetal auscultation in detection of fetal distress.

Auscultation of Fetal Heart Rate

Since 1821, fetal bradycardia has been recognized as an indicator of fetal distress. However, possibly because of the short sampling time and the high probability of measurement error, auscultation has rarely proved to be of much value in predicting fetal distress. Benson¹¹ concluded that "no reliable single auscultatory indicator exists in terms of fetal heart rate, save in an extreme degree."

However, three recent studies seem to contradict Benson's 1968 findings.¹²⁻¹⁴ Because they represent three of the only four randomized controlled trials done in this area, they are particularly important. However, three factors militate against using the results as conclusive evidence in support of the efficacy of auscultation. (1) The nurse/patient ratio was higher than is often practical. (2) Auscultation was compared with EFM and not with a control group which had neither. (3) The lack of significant differences between auscultation and continuous EFM may have been simply due to too small a sample size.

Continuous Electronic Fetal Monitoring

Continuous EFM may be done directly by the attachment of an electrode to the fetus after rupture of the membranes, or indirectly by applying instrumentation to the abdomen. Simultaneous recording of uterine contractions is achieved by directly measuring the change in pressure within the uterus or by using sensors placed on the abdominal wall. Unfortunately, indirect measurement also has significant drawbacks.

Indirect Methods

A phonocardiogram uses a sound transducer to detect the fetal heart sounds. The first heart sound, due to its usually higher amplitude, can be isolated electronically and used to measure heart rate and beat-to-beat variability. Interpretation may be complicated or confused by variability in amplitude of the heart sounds, maternal and fetal movement, maternal bowel sounds and movement of the transducer.

A fetal electrocardiogram may be obtained by attachment of electrodes to the maternal abdomen, using electrical filtering to isolate the fetal signal from the maternal signal. Due to the low amplitude of the fetal signal, especially in gestations of less than 27 weeks and more than 36 weeks, significant artifacts may occur due to maternal and fetal movement.

The most commonly used method of indirect fetal heart rate monitoring uses Doppler ultrasound. This method uses the change in reflections of sound waves by one of the four heart valves. Although use of

pulsed Doppler and arrays of transducers can minimize the artifacts due to fetal and maternal movement, significant loss of accurate beat-to-beat variability may occur.

External measurement of uterine activity is accomplished by using a tocodynamometer. This is a strain gauge strapped to the abdomen which measures changes in pressure exerted against it. Anything which causes movement of the abdominal wall, such as fetal movement, maternal movement—including respirations—and a loose-fitting strap, will cause artifacts.

Direct Method

The direct method can be used only after rupture of the membranes. An electrode (most commonly a stainless steel spiral electrode) is inserted through the partially dilated cervix and fixed to the fetus. This method eliminates most of the artifacts due to movement, experienced with the indirect methods, and greatly increases the electronic signal to noise ratio.

Movement artifacts are also greatly reduced by use of direct intrauterine pressure measurements. This is accomplished by placement of a fluid-filled catheter, connected to an external strain gauge, through the cervix. This method provides the most accurate measurement of resting pressures as well as frequency, duration and intensity of contraction.

Because of the direct access to the fetus, it is possible to obtain a blood sample for testing of the pH. The method for obtaining the blood is similar to that used in finger sticks. Blood is drawn for pH determination only after ominous patterns are observed on the electronic monitor and the pH value is used for corroboration of fetal distress. This additional method is helpful, but a normal pH in the presence of an ominous fetal heart rate tracing cannot be taken to preclude fetal distress.

Efficacy of Continuous Electronic Fetal Monitoring

Results of six large retrospective studies of the effect of EFM on intrapartum fetal death rates (IFDR) and neonatal death rates (NDR) were published between 1973 and 1977.¹⁵⁻²⁰ All showed a ratio of IFDR for non-EFM vs. EFM fetuses of greater than 1.5 in four of the studies, but two showed ratios of 0.6 and 0.9.^{15,18} It should be noted that in all these studies monitoring was done because the pregnancies were judged to be at higher risk.

Neutra et al²⁰ used a risk factor weighing scheme to divide the total population he studied into five risk categories. For the four higher risk categories, the NDR ratios varied between 1.4 and 2.1 in favor of the monitored group. However, for the lowest risk group, which constituted 75% of the total, the ratio was reversed (0.4).

To date, only four randomized controlled trials have been published, which involve a total of some 2,000 patients.^{12-14,21} In none of these was a statistically significant difference in mortality demonstrated between EFM and non-EFM groups. However, it should be emphasized that a much larger population—28,000 patients by one estimate—would have to be studied in order to achieve statistical significance for such a relatively rare event.

Complications With the Use of Internal Monitoring

The use of internal monitoring, at least on theoretical grounds, is clearly advantageous. It provides uninterrupted information with a minimum of artifacts. However, because of its invasiveness, it can produce complications both to the neonate and the mother. Complications which have been noted in the literature include infant complications: with proper placement of the scalp electrode, scalp abscess or disseminated infection; with improper placement of the scalp electrode, CSF leakage, eyelid lesion, arterial bleeding or scalp hematoma; and due to the intrauterine catheter, umbilical vessel damage or umbilical cord compression. Maternal complications include infection and soft tissue injury.

Scalp abscess is the most frequently reported complication. The rate varies from 0.3% to 5.4% with an overall average of 0.5%.⁴ In the only prospective study done, there was reported an incidence of 4.5%.²² Of these, 83% were treated by local means alone, and the rest were given systemic antibiotics. None of the infants developed sepsis or osteomyelitis.

Improper placement of the electrode in isolated cases has been reported to have caused CSF leakage, eyelid lesions, arterial bleeding and scalp hematoma,⁴ but these are quite rare.

Fetal complications due to insertion of the intrauterine catheter are also very infrequent. Trudinger reported, in a series of 7,042 monitored labors, four cases of umbilical vessel damage and one of cord compression.²⁷

Since the vaginal flora are abundant, introduction and maintenance of instruments through the vagina and into the uterus raises the question of potential intrauterine infection. However, only two of seven retrospective studies showed an increase in febrile morbidity for the EFM group.^{23,24} In only one of the prospective studies was a significant difference shown between monitored and unmonitored groups.¹² However, in a repeat study done by this same group of investigators, no difference was found.¹³

Maternal soft tissue damage due to insertion of the intrauterine pressure device has been reported as case studies only. The incidence is probably very low, but because no large study has reported on it, the exact incidence is unknown.

Cesarean Delivery Rate

There is no doubt that delivery by cesarean section has been steadily increasing. Because of the temporal association between the increasing use of EFM and this increase in surgical intervention, some investigators have raised the question of cause and effect. Because there have been many other changes in pregnancy management during the same time span, determination of the magnitude of this cause and effect relationship is not easy.

Since 1973, at least 17 studies have been published which address this issue. Only four, the same ones previously cited in this report, are prospective studies^{12-14,21} and all of them showed a higher C-section rate (approximately doubled) for the monitored group vs. the unmonitored group. It is important to note that in one of these studies¹⁴ as in one other,²⁵ the C-section rate for fetal distress was greatly

reduced when scalp pH was measured following ominous decelerations.

Bottoms et al²⁶ reviewed the reported literature and found an overall increase of 8% in the C-section rate between 1960 and 1976. Of this 8%, they concluded that 13% were due to fetal distress. This led them to conclude that EFM caused a maximum of a 1% rise in the overall C-section rate. A recent extensive review by an NIH Consensus Development Panel²⁸ could attribute, at most, only 10% to 15% of the increase in the cesarean rate to fetal distress. The panel concluded that the increase in C-sections which paralleled the increase in EFM was "not necessarily reflective of cause and effect."

For all those concerned, physicians and patients alike, minimizing C-sections is a laudable goal. However, this obviously should not be done at the expense of successful management of pregnancy. Since no screening test is without false-positives, undoubtedly a few C-sections will be performed which are not absolutely necessary. Since the overall influence of EFM on C-section rate is relatively low, the small percentage of those that were not beneficial is acceptable in the light of the potential benefit to the many distressed fetuses.

Summary

Continuous EFM, with direct application of the instruments, provides the best information on the status of the fetus during labor. Appropriate utilization of the information can decrease perinatal mortality and morbidity.

Because intrapartum fetal distress is relatively infrequent, even in high-risk pregnancy, large numbers of subjects are needed to reach statistical significance. For low-risk pregnancies, the number becomes so large that carrying out a randomized controlled trial is impractical.

Use of direct methods of continuous EFM has risks, including an increase in cesarean section rate. However, that data support the use of continuous EFM in high-risk obstetrical patients. Even so, EFM is only a tool for fetal assessment, and the information obtained is only one factor for informed clinical judgment.

Conclusions

1. Continuous EFM is clearly warranted in high-risk pregnancies. Examples of high-risk pregnancy may include (a) antepartum risk indicators; (b) presence of meconium stained amniotic fluid; (c) intrauterine growth retardation; (d) preterm or post-term gestation; (e) use of oxytocin in labor; and (f) abnormalities of fetal heart rate obtained by other methods. It is clear that many intrapartum events may occur that might change a low-risk pregnancy to a high-risk one.

2. If intermittent heart rate monitoring by auscultation is performed then: (a) it should be done at least every 30 minutes during the first stage of labor; (b) it should be done at least every 15 minutes during the second stage; and (c) in both situations, it should

(Continued on page 277)

Primary Fibrinolysis

CHARLES E. KOSSMANN, M.D., Editor

RICHARD S. AYCOCK, M.D.
(Resident Physician)

A 66-year-old white man came to the Memphis VA Hospital with the chief complaint of a swollen arm following a fall four days earlier. He was admitted to the surgical service with massive hematomas of the left upper extremity and thorax. No fracture or large blood vessel damage could be found. He was transferred to the medical service after laboratory studies revealed an abnormal bleeding tendency.

Past history disclosed years of alcohol abuse and previously suspected hepatic cirrhosis without biopsy confirmation but with several hospital admissions for hepatic encephalopathy. In 1980 removal of a basal cell carcinoma from the skin of the nose was followed by prolonged bleeding. A diagnosis of primary fibrinolysis¹ was made, and controlled with aminocaproic acid² given over a period of two weeks. Later that year bilateral cataract removal with prosthetic lens implants was performed; potential hemorrhage was avoided by the prophylactic administration of aminocaproic acid. In January 1981, an abdominal aortic aneurysm 7 cm in diameter was found, but the possibility of excision was dismissed because of the known potential for excessive clot lysis. There was a long history of chronic obstructive pulmonary disease, probably the result of cigarette smoking for four decades, and hypertension. Medication for the latter included methyldopa, furosemide, and supplementary potassium chloride.

He was an obese lethargic but oriented white man whose temperature was 98°F, pulse rate 100 beats per minute, irregular (atrial fibrillation), blood pressure 130/90 mm Hg without change on tilt, and respirations 16/min. The conjunctivae were icteric. The cardiac examination was negative except for the irregular rhythm, and there were a few rales in the right base. A firm liver was enlarged, with a midclavicular span of 14 cm, and a pulsatile mass, the aorta, could be felt in the epigastrium. The most remarkable portion of the examination was the skin, which displayed huge hematomas largely in areas exposed to the sun (Fig. 1). A good explanation for this distribution was lacking despite multiple laboratory tests and much speculation. The left arm, injured in the fall, displayed in addition to the hematoma an eschar which later became infected. All pulses in the extremity were easily felt. In addition to the exposed areas, hematomas were found in the skin of the left thorax and both flanks, a finding of concern in view of the abdominal aortic aneurysm.



Figure 1. Photograph of the left side of the recumbent patient showing extensive subcutaneous hemorrhage (dark area) and eschar of left forearm.

The hematocrit was 26% after 3 units of packed red blood cells were given. The platelet count was 58,000/cu mm, the white blood cells 7,100/cu mm. The blood smear was normal; there were no fragmented red blood cells. The blood electrolytes and urinalysis were near normal. The serum creatinine was 1.4 mg/dl, the bilirubin 3.2 mg/dl, and the calcium 7.4 mg/dl. Total serum protein was 4.5 gm/dl of which 2.5 gm was albumin. The serum protein electrophoresis displayed beta-gamma bridging. The SGOT was normal. An electrocardiogram displayed atrial fibrillation with a slow ventricular rate, an occasional ventricular premature systole, low voltage in all leads, and nondiagnostic abnormalities of ST and T segments. A thoracic roentgenogram showed a normal heart and lungs.

Further hemotologic data included a fibrinogen level of 77 mg/dl (normal 150-350), fibrin degradation products positive at 1:40 dilution (normal <1:10), a euglobulin clot lysis time of 100% at three hours (normal 100% lysis in more than three hours but less than 24 hours), a protamine sulfate test weakly positive and a prothrombin time (PT) and partial thromboplastin time (PTT) differing by only two seconds from the controls. A test for the bleeding time was discontinued after 30 minutes of persistent bleeding.

On transfer to the medical service the patient was treated with intravenous aminocaproic acid with an initial loading dose of 4 gm followed by 24 gm per day. In addition, he received 4 units of fresh frozen plasma and 8 units of platelets on admission, and packed red blood cells for a total of 10 units over a period of a week. The hematomas and the

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.
Presented Oct. 7, 1981.

hematocrit stabilized in approximately 48 hours. He was given thiamine, folate, and lactulose for lethargy and presumed alcoholism. He had no evidence of withdrawal while in the hospital and no progressive encephalopathy. The infected eschar on the left arm was treated with oral dicloxacillin and local antiseptic therapy with good results.

Probably as a result of the low plasma proteins and the transfusions of blood elements, a roentgenogram of the thorax four weeks after admission disclosed an enlarged heart with prominence of the pulmonary vessels, greater on the left than on the right, and "veiling" of the left lung, interpreted as evidence of congestive heart failure, left pleural effusion, and atelectasis of the left lower lobe. Two weeks later without specific therapy the congestion of the heart and lungs improved but some left pleural fluid remained.

At the time of discharge the PT and PTT were unchanged. Bleeding time was 7.5 min. The platelet count was 98,000/cu mm. The hematocrit was 38%. The patient was discharged to a nursing home with discharge diagnoses of primary fibrinolysis with multiple traumatic subcutaneous hematomas; ethanol abuse with probable hepatic cirrhosis; abdominal aortic aneurysm; essential hypertension, controlled; atrial fibrillation of unknown cause; transient pulmonary congestion with fluid overload.

The patient returned to the hospital three months after discharge for low grade fever and dehydration. A thoracic roentgenogram was normal, but the electrocardiogram disclosed atrial fibrillation with a ventricular rate of 150/min. After a week of steady improvement he died suddenly. No necropsy was obtained.

MARION DUGDALE, M.D.
(Professor of Medicine, Hematology)

This patient was the most spectacular bleeder that has been seen around here for quite a long time. Subcutaneous hematomata (Fig. 1), are not at all unusual in a person who has active fibrinolysis,³ often induced, as in this man, by a small injury. Whether he had primary or secondary fibrinolysis is part of the diagnostic problem. We will get to that eventually, but I want to start by describing the fibrinolytic system to you because it has been a long time since we went through that subject on Grand Rounds.

The Plasminogen Molecule

The plasminogen molecule is depicted in Figure 2. I am showing you this as an introduction to the extensive illuminating chemistry being done on components of the fibrinolytic system. If you look at the present clinical literature you get the feeling that fibrinolysis is not a fashionable topic right now, and it isn't, but there have been

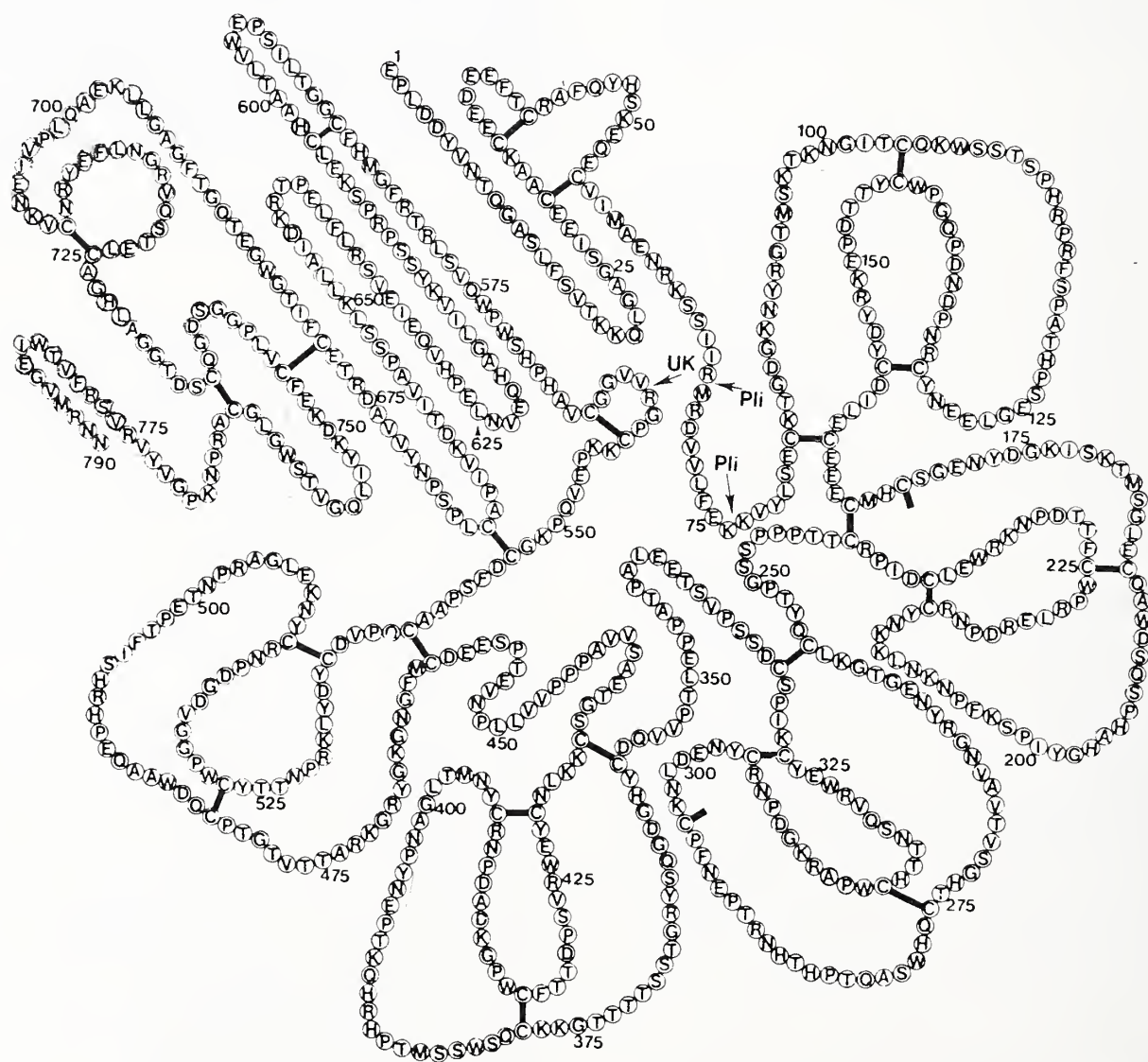


Figure 2. The primary structure of human plasminogen. UK, urokinase; Pli, activation cleavage points (from Collen³).

quite a number of biochemists who have been busy working on this molecule for quite a while, and as you can see they've got it put together very nicely. It is a very fancy molecule, and is important not only because it is the center of the whole fibrinolytic system but also because it exists in the circulating blood. We all have a fair amount of it, but it is totally inactive. The trick is in getting it activated, because once this is achieved the whole fibrinolytic system is turned on. There are two places in this molecule that are worth further attention; they are marked Pli and indicate potential cleavage points, one between the 67th and 68th amino acids and the other between the 76th and 77th. Cutting off that part of the molecule proximal to either point is the first step in its activation. It then has to be opened between the 560th and 561st amino acids by urokinase. Urokinase is used here only as an example; all other compounds that activate the plasminogen molecule do it by breaking the molecule at the same place. When thus separated, instead of being one curly long continuous strand, the molecule becomes really two strands held together by two disulfide bonds. Once in the double stranded state it is the active mole-

cule, plasmin, a proteolytic enzyme formerly called fibrinolysin. The latter term is becoming popular again because it does point out the preferential lytic effect the enzyme has on the fibrin molecule, a connotation which the term plasmin doesn't have. On the other hand the name plasmin is probably justified because it is a broadly functional proteolytic enzyme; it can attack all sorts of proteins but physiologically speaking it does the deed best on and in the presence of fibrin.

Activation of Plasminogen

Plasminogen can be activated in three ways—intrinsic (humoral), extrinsic (cellular), and exogenous (Fig. 3). As might be expected in a balanced control system, activators are opposed by inhibitors. The pathway that stimulated quantitative interest in the conversion of plasminogen was the recognition that the streptococcus could produce streptokinase, which dissolves fibrin clots. It became obvious, after further work, that it didn't do it directly. In other words you couldn't put a streptococcus or its streptokinase onto a purified fibrin clot and expect the clot to be lysed; it had to go through another phase.

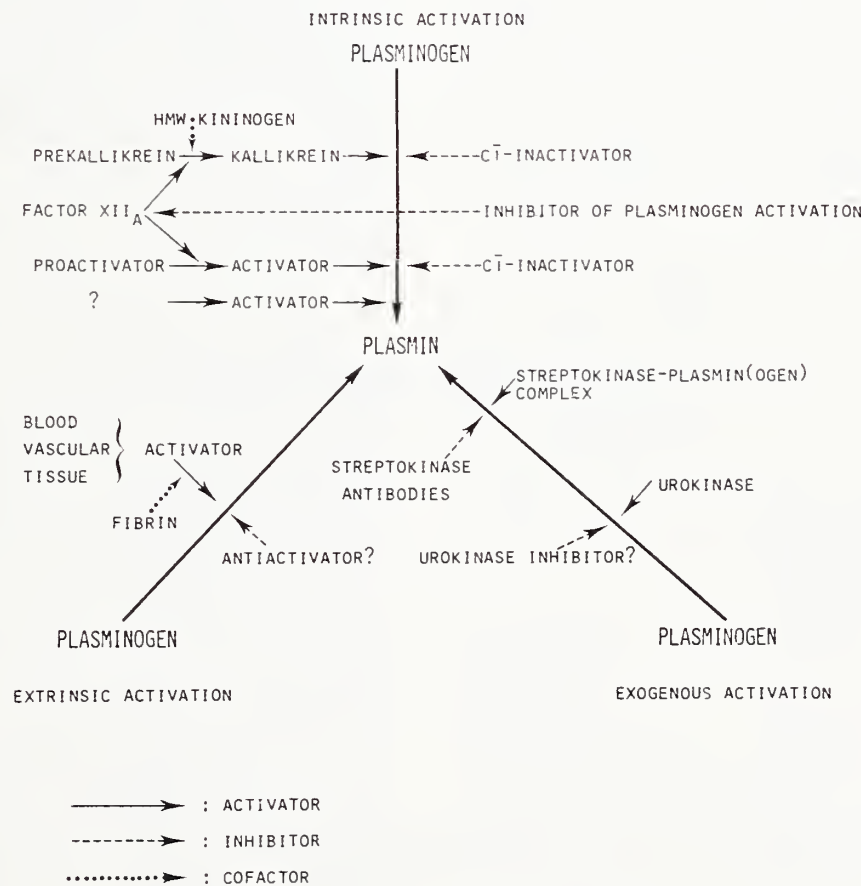


Figure 3. Schematic representation of activation pathways of plasminogen and site of action of inhibitors. HMW, high molecular weight; C1, activated complement C1 (from Collen³).

Whether this intermediate step is a direct reaction with plasminogen, or consists of the activation of an intermediate is still a matter of much argument which we will leave to the biochemists to settle. For our purposes the streptokinase does convert plasminogen to plasmin. In some pathologic states this is of course important, but it is not the ordinary physiologic way of getting fibrinolysis.

Urokinase initiates an altogether different type of reaction. This enzyme is a product of the urinary tract. Exactly which cells produce it remains uncertain, probably because several cells in the urinary tract have this capacity. The reason for urokinase being in the urine is not obvious unless one postulates that the tract has developed urokinase in order to keep itself free of obstructing clots. Pathologically, urokinase can cause trouble in the form of bleeding anywhere from the glomeruli on down. Such hemorrhage is unusually difficult to stop at times. There may be obvious associated pathology of the urinary tract but sometimes there is not. Thus, urokinase is a physiologic controller of clotting but arises from a source exogenous to the circulation; like streptokinase, it can be isolated chemically.

The other two sources of physiologic agents that cleave plasminogen are found in the blood itself or in tissues or endothelium of the vascular tree, and are called intrinsic (humoral) and extrinsic (cellular) activators respectively (Fig. 3). It is not certain how many activators there are in all. Though divided into the three kinds as noted based on source, thinking is that they are probably the same, but different from urokinase.

The extrinsic activators arise in blood vessels, particularly the veins and capillaries. The endothelial cells can release activators when they are injured or suddenly become hypoxic. It is a question whether this process is just a perforated cell emptying itself into the bloodstream, or a secretory process in response to injury. Tissues other than endothelium probably also synthesize activators. It is known that certain tissues when ground up seem to have more activator activity than expected from the amount of endothelial tissue therein. On the other hand, some tissues do not have any activator even though they have a lot of endothelial cells; the prime example is the normal liver. Paradoxically, the cirrhotic liver has a tremendous amount, far out of proportion to the amount of endothelium there.⁴

The third way of "turning on" the fibrinolytic system involves the same contact system which

initiates coagulation. A dual role in this process is played by factor XII (Hageman factor). Its activation will convert a proactivator to an activator and also change prekallikrein to kallikrein, a plasminogen activator in its own right.

One must conclude that a functional fibrinolytic system is of great importance to the body, hence the multiple routes for ensuring its activation. But there are also several antagonists to insure that inappropriate activation does not occur. There are at least three classes of potential antiactivators (inhibitors): anti-intrinsic activators, anti-extrinsic activators, and anti-urokinase. The physiologic roles of these have yet to be defined. In addition there are two potent antiplasmins: α_2 -antiplasmin, a rapidly acting inhibitor, and α_2 -macroglobulin which is slowly reactive. The former is of major physiologic importance in the regulation of fibrinolysis.

Action of Plasmin

Plasmin is the enzyme that actually digests fibrin. No other molecule, under normal circumstances, is attacked by plasmin. Its half-life in the blood is extremely short, about ten seconds. The half-life of the intrinsic activators is somewhat longer, probably on the order of hours, depending on which activator is measured.

Under normal circumstances, then, what does the fibrinolytic system do? It has been suggested repeatedly over the years that clotting is going on within blood vessels all the time, and that fibrinolysis therefore must also be going on in order to keep the blood vessels open. This is probably not true. The fibrinolytic system, like the clotting system, seems to be present but inactive until something triggers it into action.

What is the stimulus, then, that turns it on? It is clear that injury to tissue activates it, probably through extrinsic mechanisms (Fig. 3). The injured tissue not only releases its own activator but also "turns on" factor XII to activate conversion of plasminogen. Sudden transient hypoxia will also initiate the release of activators into the bloodstream. Fibrinolysis can also be initiated by localized disease or injury of tissue. Under usual circumstances the activation is localized to the area of injury or ischemia. Activators or plasmin escaping these areas are promptly neutralized by the various inhibitors. Under pathologic circumstances even local disease can lead to generalized or systemic activation of the fibrinolytic system, the classic examples being carcinoma of the prostate, and cirrhosis of the liver, as in to-

day's patient.

Acute disease of the activator-deficient normal liver (e.g., hepatitis) will not cause fibrinolysis. The obstetricians may see fibrinolysis as a complication of pregnancy and delivery, usually associated with diffuse intravascular coagulation. Localized fibrinolytic activity occurs with surgical trauma to the benign or malignant prostate, or to any organ that contains a large amount of activator. As often happens this can produce a considerable local problem in hemostasis even though systemic activation of the fibrinolytic system has not occurred. As noted, the kidneys can show local fibrinolysis. There is a rather obscure condition called primary renal bleeding, called that because there is no obvious reason for the kidneys to bleed. It is assumed that fibrinolysis has something to do with it and it is treated as such with some success.

Another localized type of fibrinolytic activity in which there has been much recent interest is the ruptured berry aneurysm. Once such an aneurysm has ruptured, the patient who survives is in a very unstable state for about two weeks. If bleeding does not recur during this time, the patient is then a candidate for surgery. In at least some of these patients, rebleeding appears to be associated with dissolution of the mature clot at the rupture site. There has been much attention given to the problem of preventing this localized fibrinolysis with a view to getting the patient through the critical first two weeks. We will talk about the management of these fibrinolytic states below.

Primary vs Secondary Fibrinolysis

We need to define terms before getting into the differentiation of primary from secondary fibrinolysis as I will use the term today. Primary fibrinolysis means that disseminated intravascular clotting (DIC) is *not* the initiating underlying problem. In this view, if a patient with cirrhosis of the liver develops fibrinolysis, the latter is classified as primary, in contrast to some classifications that would regard it as secondary (i.e., secondary to cirrhosis). I like the other way of looking at it, saying that the secondary refers to a response to disseminated intravascular clotting; primary fibrinolysis then includes all the others. The important initial diagnostic problem is to decide whether the underlying cause of the primary fibrinolysis is amenable to treatment. If not, at least the fibrinolytic process itself may be attacked, as was done in today's patient.

This brings us to the matter of whether DIC is present.⁵ You have all gone through this diagnostic problem many times before, but let's do it one more time because it isn't always easy, particularly when dealing with patients with hepatic disease. The differences in the two states—primary fibrinolysis and fibrinolysis secondary to DIC—are listed in Table 1. With regard to incidence, DIC is very common but most of the time it isn't serious enough to attract attention or investigation. Primary fibrinolysis (PF) probably is reasonably rare; underlying disease is usually present but not always readily detected. Platelets classically are consumed in DIC whereas they are not used up in PF. In fact, they

TABLE I
DIFFERENCES BETWEEN DISSEMINATED INTRAVASCULAR
COAGULATION AND PRIMARY FIBRINOLYSIS*

	Acute Disseminated Intravascular Clotting	Primary Fibrinolysis
Incidence	Relatively common	Very rare
Underlying disease	Present	Often absent, occasionally liver disease
Platelets	Low	Usually normal
Fibrinogen	Low	Low
Factor V	Low	Moderately decreased
Factor VIII	Low	Normal to moderately decreased
Plasma paracoagulation test	Positive	Negative
Clot lysis time	Normal or long	Rapid
Euglobulin lysis time	Normal or long	Rapid
Fibrin plate	Normal or slightly increased lysis	Markedly increased lysis
Serum fibrin split products	None to large amounts, depending on degree of secondary lysis	Very large amounts

*Modified from Rapaport.⁵

are protected from use, if you want to look at it that way, by the products of digested fibrin and fibrinogen that can coat the platelets and make them less reactive than normal. The platelet count will be normal, unless, of course, there is a disease present which of itself causes thrombocytopenia. Fibrinogen can be low in both DIC and PF, so low that only traces are left; clearly the degree of fibrinogen depletion is of no diagnostic help. Factor V is low in the usual DIC; it will be low in PF only if the fibrinolysis is extreme. The same remarks apply to factor VIII. It is consumed in DIC; in PF it is digested away by the proteolytic activity of plasmin. The plasma para-coagulation tests, such as the protamine sulfate test or the ethanol gelatin test, are used to detect the presence of fibrin monomers in DIC, but the very earliest products of fibrinogen digestion may also be coagulable under the test conditions, in which case the test may be weakly positive in PF.

The lysis time of either whole blood or plasma clots will be normal in DIC (i.e., they will not lyse in several days). In PF, clot lysis can occur very quickly or may not occur for more than a day. Most laboratories discard the clots after a few hours of observation and thus miss the delayed clot lysis, which may occur at 24 hours or more.

The euglobulin lysis time may be normal or short in DIC. In this test, the patient's own fibrinogen is used as a substrate. If the patient's own fibrinogen is low, then there isn't much substrate. Very flimsy little clots will form, and a normal amount of fibrinolytic activity can digest them very quickly. If the fibrinogen level is in the normal range (250 to 350 mg/dl) the euglobulin clot will not lyse rapidly, so when interpreting a euglobulin clot lysis time you have to know what the fibrinogen is. If it is only on the order of 50 mg/dl or less, then expect the euglobulin clot lysis time to be short even though fibrinolytic activity is not excessive. In PF, rapid lysis of the euglobulin clot will occur regardless of the fibrinogen concentration, and can occur in just a few minutes. This, of course, is the only test of the fibrinolytic system that is a reasonably rapid one.

The fibrin plate method is a way of measuring the activators in the circulating blood. A layer of fibrin is made in a petri dish by clotting a solution of commercial beef fibrinogen that contains a considerable amount of plasminogen as a contaminant. When a test solution (e.g., plasma or

extract of plasma) is put on the fibrin layer, it will activate the plasminogen and digest away the fibrin to produce a nice circular hole. The size of the hole depends on the amount of activator in the test solution. In PF you expect to find large holes. In DIC the areas of lysis are small, as they are in normal blood. However, this test is not very useful clinically, since a rapid answer is usually required and the fibrin plates require about 18 hours of incubation.

The serum fibrin split products (FSPs) are increased in both entities and may be present in very large amounts.

Now let us return to the explanation of why you will not find activation of the plasminogen in the fibrin plate in DIC when you will in PF. In DIC, activation of the fibrinolytic system is strictly a *local* situation. The fibrin occluding small blood vessels produces hypoxia locally, stimulating release of the activators locally. The clot is digested away, relieving the obstruction; blood flow resumes, and hypoxia is corrected. Any plasmin and activators produced locally are quickly neutralized by their corresponding inhibitors in the bloodstream, and as a result the fibrin plates do not show increased activator levels. All that remains of this local fibrinolysis are the FSPs, which remain in the circulating blood for a few hours and can readily be measured. By contrast, in primary fibrinolysis activators are released into the blood in such quantity that the inhibitors are overwhelmed and plasmin forms in the circulating blood where it attacks not only fibrinogen but several other coagulation proteins as well. The fibrin plates measure the presence of the activators. Our usual clinical tests do not distinguish between the digestion products of fibrin and fibrinogen, thus FSPs are detected in large amounts.

Once it is decided that fibrinolysis is going on, the next task is to determine whether it is primary or secondary. With liver disease there is a problem because many things other than fibrinolysis can go wrong with the hemostatic mechanisms. The fibrinolytic system can indeed be hyperactive, and in some cirrhotic patients this is the major cause of bleeding. The reasons for the hyperactivity seem to be multiple. In some there seems to be an excess of activators of plasminogen; where they come from is not entirely clear. There is very definitely a diminution in two inhibitors, the α_2 -antiplasmin and to a less extent the α_2 -macroglobulin. So with a decrease in inhibitors and an increase in activators, exces-

sive fibrinolysis will occur generally in the circulating blood, not just in localized areas, and a bleeding diathesis can result. At the same time, the cirrhotic liver has trouble utilizing vitamin K to manufacture the various clotting proteins or even factor V. In fact, the only clotting factor these patients can make is factor VIII, because liver probably isn't involved in making it. They can make "funny fibrinogen," and in a fair number of people with cirrhosis of the liver this abnormal fibrinogen can be produced, and can be recognized by a long thrombin time. It still can make a clot, but it just isn't a good one and hemostatically it is not as effective as one from normal fibrinogen. To make matters even worse in cirrhosis of the liver, platelets may not function normally or may be excessively consumed by an associated hypersplenism. Thus, in the individual with cirrhosis there is a formidable problem of sorting out what is the cause of the bleeding when present.

There is a great deal of literature and a lot of controversy over the question of whether there is actually DIC in cirrhosis, or separate abnormalities of coagulation and fibrinolysis. The latest point of view is that DIC does not occur to any extent in a cirrhotic individual. If there is very active hepatocellular disease with the cirrhosis, then DIC may indeed be encountered. In patients with acute injury to the liver DIC certainly occurs, but they don't display activation of the fibrinolytic system.

By and large, then, in a patient with cirrhosis or one who has a likelihood of having cirrhosis, as this gentleman did, with activation of the fibrinolytic system it is reasonable to assume that there is no underlying DIC and, therefore, the fibrinolysis is primary and can be treated with necessary replacements without fear of making the situation worse, as it were, by pouring gasoline on the fire.

Therapy

So what does one use? Aminocaproic acid is the only drug we have in this country for neutralizing fibrinolytic activity. It does so by its action on plasminogen. The aminocaproic acid molecules are very small. They bind to the plasminogen molecule, change its configuration in such a way that the activators can no longer do what

they are supposed to, and conversion to plasmin is blocked. The whole fibrinolytic process grinds to a halt.

How much to use is always a problem; there is no magic answer. We do know that something of the order of 4 gm would totally prevent activation of all the plasminogen in a normal individual, but what we don't know is how much activation there is in somebody who has, for example, cirrhosis of the liver, or has just had open-heart or pulmonary surgery where complicating fibrinolysis can occur acutely. There is no quick way of measuring how much activator that must be blocked has gotten loose into the bloodstream. Fibrin plates used for measuring activator levels take 18 hours before reading, obviously too long a period to get the desired information. So, we go back to using the euglobulin clot lysis time to tell us that there is lysis and then simply pick a dose of aminocaproic acid out of the air, depending in part on the size of the patient. If the patient is a large man, use a little more than if she is a small woman. But, other than that, there are no magic guidelines to dosage.

How do you know that you have accomplished the desired result when you are being so unscientific about the dose? We really don't know. We cannot use the euglobulin clot lysis time to tell us. In the preparation of the euglobulin solution the aminocaproic acid is broken off the plasminogen to which it was attached and what is measured is the underlying fibrinolytic activity that would be there if the person did not have the aminocaproic acid in his system. Therefore, euglobulin clot lysis time cannot be used to tell you whether you have accomplished what you set out to do. You can test for the FSPs. If the concentration of FSPs goes down, you know you have turned off the fibrinolytic activity.

REFERENCES

1. Porter GH: Fibrinolysis: An unusual cause of bleeding. *Med Clin North Am* 51:1061-1072, 1967.
2. Griffin JD, Ellman L: Epsilon-aminocaproic acid (EACA). *Semin Thromb Hemostas* 5:27-40, 1978.
3. Collen D: On the regulation and control of fibrinolysis. Edward Kowalski memorial lecture. *Thromb Haemostas* 43:77-89, 1980.
4. Roberts HR, Cederbaum AI: The liver and blood coagulation: Physiology and pathology. *Gastroenterol* 63:297-320, 1972.
5. Rapaport SI: Defibrination syndromes, in Williams WJ, Beutler E, Erslev AJ, et al: *Hematology*, ed 2. New York, McGraw-Hill, 1977, p 1463.

W. BARTON CAMPBELL, M.D.

A 71-year-old man was transferred to St. Thomas Hospital for evaluation of angina pectoris and increasing shortness of breath. He was said to have "third degree heart block" prior to his transfer. As a young man, he recalled a prolonged illness characterized by fever and migratory polyarthritis. He was subsequently noted to have a murmur of aortic stenosis and more recently a decrescendo blowing diastolic murmur of aortic insufficiency was described.

The blood pressure was 162/74 mm Hg and the pulse rate was 42/min. In addition to the above described systolic and diastolic murmurs he had notable acrocyanosis. Electrocardiogram showed evidence of left atrial enlargement and left ventricular enlargement with ST-T wave changes. A rhythm strip was obtained (Fig. 1).

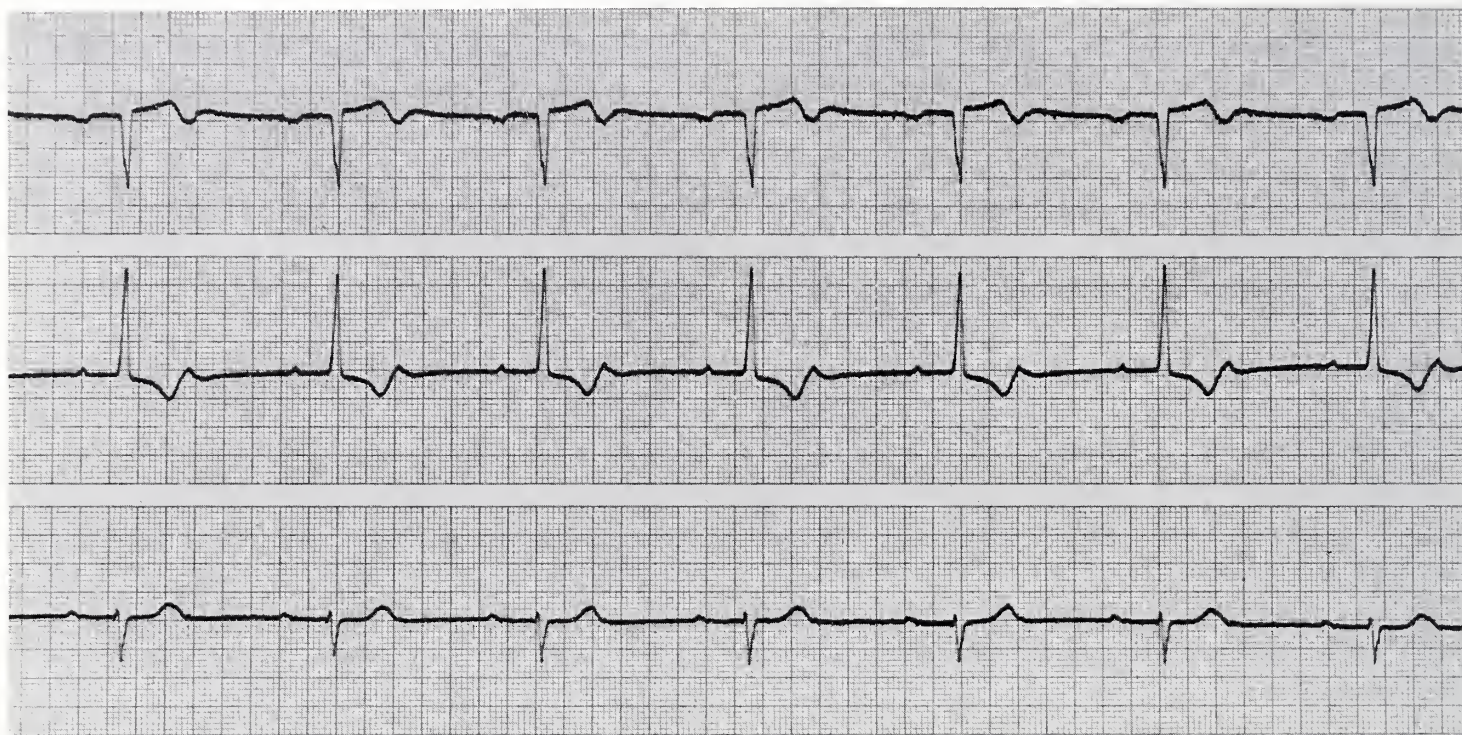


Figure 1

Discussion

This rhythm strip shows a fairly regular ventricular rate at 41/min. On close inspection two P waves are discerned for every QRS complex. A P wave is seen at the end of the preceding T wave and the atrial rate is 82/min. This rhythm strip represents a 2:1 atrial-ventricular (AV) block.

AV conduction defects are commonly divided into first, second, and third degree blocks. First degree block is characterized by a prolonged PR interval (greater than 0.20 seconds at normal heart rates) with each P wave being followed by

a QRS complex. Second degree blocks are those in which some P waves result in ventricular capture and others do not. Third degree heart block exists when no P waves result in ventricular capture. The second degree heart blocks are further subdivided into Mobitz type I (also called Wenckebach) and Mobitz type II block.

Mobitz type I is characterized by progressive prolongation of the PR interval until a "dropped beat" results in a P wave with no following QRS complex. (The RR intervals in Mobitz type I block usually progressively shorten because the increment of prolongation usually decreases through the cycle.) Mobitz type II block is characterized by lack of a QRS following a P wave in the absence of antecedent PR lengthening. His


From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

bundle electrocardiograms will disclose the location of the conduction problem, which may be either above or below the bundle of His that penetrates the fibrous skeleton separating atria and ventricles.

Mobitz type I (Wenckebach) blocks are more commonly located above the His bundle while Mobitz type II blocks are much more commonly located in the infra-His conduction tissue. It should be emphasized that a second degree block of 2:1 periodicity cannot be called Mobitz type II or Mobitz type I without further data (e.g., His bundle studies or accompanying arrhythmias of Mobitz II or Mobitz I type). The appropriate term therefore is simply a 2:1 AV block.

Conduction problems are common in aortic stenosis, especially with advancing age, increasingly severe aortic stenosis, and calcification in the area of the aortic valve. Increasing fibrosis and/or calcification at the base of the heart may impinge upon the conduction system. The infra-His conduction system is most commonly involved in calcific aortic stenosis. AV conduction may deteriorate in the early postoperative period.^{1,2}

After this patient had a temporary pacemaker placed, cardiac catheterization was carried out, revealing a peak systolic aortic valve gradient of 86 mm Hg at a paced rate of 75 beats per minute. The cardiac index was moderately low at 1.9 liter/min/mm² (Fick determination). Aortic root angiography revealed mild aortic insufficiency. At surgery a densely calcific aortic valve was removed and replaced with a No. 25 porcine xenograft (Carpentier-Edwards). Two permanent sutureless myocardial electrodes were attached to the left ventricle and the patient was given a subcutaneous permanent pulse generator. He encountered no unusual problem post-operatively, and when seen six months following discharge he was pacing satisfactorily with intermittent sinus rhythm.

DIAGNOSIS: Second degree (2:1) AV block with calcific aortic valve disease. 

REFERENCES

1. Dhingra RC, Amat-y-Leon F, Pietras RJ, et al: Sites of conduction disease in aortic stenosis. Significance of valve gradient and calcification. *Ann Intern Med* 87:275-280, 1977.
2. Thompson R, Mitchell A, Ahmed M, et al: Conduction defects in aortic valve disease. *Am Heart J* 98: 3-10, 1979.

Electronic Fetal Monitoring


(Continued from page 262)

be performed for a period of 30 seconds after the uterine contraction.

3. Therefore the use of EFM in low-risk pregnancies should not be denied the patient or her physician who might choose that option.

REFERENCES

1. *Obstetrical Practice in the United States. Hearing before the Subcommittee on Health and Scientific Research, 95th Congress, Second Session, Senate Committee on Human Resources, April 17, 1978.*
2. Dilts RC: Current practices in antepartum and intrapartum fetal monitoring. *Am J Obstet Gynecol* 126:491, 1976.
3. Banta HD, Thacker SB: Costs and benefits of electronic fetal monitoring. Study commissioned by the National Center for Health Services Research, DHEW, 1978.
4. Report of the Task Force on Predictors of Fetal Distress. Consensus Development Conference on Antenatal Diagnosis, National Institute of Child Health and Human Development. March 5-7, 1979.
5. Stein Z, Susser M: Mental Retardation, from *Prev Med and Public Health*, Appleton Century Croft, 1979.
6. McDonald AD: Severely retarded children in Quebec: Prevalence, cause and care. *Am J Ment Defic* 78:205, 1973.
7. Drillien CM: Studies in mental handicaps. II. Some obstetric factors of possible aetiological significance. *Arch Dis Child* 43:283, 1968.
8. Alberman E: Factors influencing perinatal wastage. *Clin Obstet Gynecol* 1:1, 1974.
9. Fujikura T, Klionsky B: The significance of meconium staining. *Am J Obstet Gynecol* 121:45, 1975.
10. Miller FC, Sacks DA, Yeh S, et al: Significance of meconium during labor. *Am J Obstet Gynecol* 122:573, 1975.
11. Benson RC, Schubeck F, Deutschberger J, et al: Fetal heart rate as a predictor of fetal distress: A report from the collaborative project. *Obstet Gynecol* 32:259, 1968.

12. Haverkamp AD, Thompson HE, McFee JG, et al: The evaluation of continuous fetal heart rate monitoring in high-risk pregnancy. *Am J Obstet Gynecol* 125:310, 1976.
13. Kelso IM, Parsons RJ, Lawrence GF, et al: An assessment of continuous fetal heart rate monitoring in labor. *Am J Obstet Gynecol* 131:526, 1978.
14. Haverkamp AD, Orleans M, Langendoerfer S, et al: A controlled trial of the differential effects of intrapartum fetal monitoring. *Am J Obstet Gynecol* 134:399, 1979.
15. Chan WH, Paul RH, Toews J: Intrapartum fetal monitoring: Maternal and fetal morbidity and perinatal mortality. *Obstet Gynecol* 41:7, 1973.
16. Kelly VC, Kulkarni D: Experiences with fetal monitoring in a community hospital. *Obstet Gynecol* 41:818, 1973.
17. Tuter G, Newman RL: Fetal monitoring: Its effects on the perinatal mortality and cesarean section rates and its complications. *Am J Obstet Gynecol* 122:750, 1975.
18. Paul RH, Huey JR, Yaeger CF: Clinical fetal monitoring—its effects on cesarean section rate and perinatal mortality: Five year trend. *Postgrad Med* 61:160, 1977.
19. Amato JC: Fetal monitoring in a community hospital: A statistical analysis. *Obstet Gynecol* 50:269, 1977.
20. Neutra RR, Fienberg SE, Greenland S, et al: Effect of fetal monitoring on neonatal death rates. *N Engl J Med* 299:324, 1978.
21. Renou P, Chang A, Anderson I, et al: Controlled trial of fetal intensive care. *Am J Obstet Gynecol* 126:470, 1976.
22. Okada DM, Chow AW, Bruce VT: Neonatal scalp abscess and fetal monitoring: Factors associated with infection. *Am J Obstet Gynecol* 129:185, 1975.
23. Hagen D: Maternal febrile morbidity associated with fetal monitoring and cesarean section. *Obstet Gynecol* 46:260, 1975.
24. Gassner CB, Ledger WJ: The relationship of hospital acquired maternal infection to invasive intrapartum monitoring techniques. *Am J Obstet Gynecol* 126:33, 1976.
25. Mann LF, Gallant S: Modern indications for cesarean section. *Am J Obstet Gynecol* 135:437, 1979.
26. Bottoms SF, Rosen MG, Sokol RJ: The increase in the cesarean birth rate. *N Engl J Med* 302:559, 1980.
27. Trudinger BJ, Pryse-Davies J: Fetal hazards of the intrauterine pressure catheter: Five case reports. *Br J Obstet Gynecol* 85:567, 1978. 

Radiology Case of the Month

TIMOTHY MCGHEE, M.D. and RANDALL L. SCOTT, M.D.

A 60-year-old white man had a history of weight loss, arthralgias, and joint swelling. Radiographs of the ankle and wrist are submitted for interpretation (Fig. 1).

1). What is the best diagnosis?

- (1) Vascular insufficiency
- (2) Pachydermoperiostosis
- (3) Thyroid acropachy
- (4) Hypertrophic pulmonary osteoarthropathy



Figure 1. Radiographs of the hand, wrist, and ankle. Note the unilaminar periosteal reaction of the long bones.

Radiographic Findings

Ankle and wrist radiographs of this patient show a smooth, linear, undulating periosteal reaction involving the distal tibia and fibula with lesser changes along the radius, ulna, metacarpals, and proximal phalanges. The periosteal changes spare the ends of the involved bones. There is bulbous soft tissue prominence of the terminal digits of the hands indicative of club-

bing, as well as bimalleolar ankle swelling. There are no erosive changes, and the joint spaces are well preserved.

Vascular insufficiency, both venous and arterial, is a well-known cause of painless periosteal reaction. In contrast to the thin, smooth pattern of periosteal response seen in this case, ischemic periosteal reaction is typically quite thick, with a roughened, irregular free edge. In addition, periosteal reaction due to vascular insufficiency would be uncommon in the wrist and hand and would not be associated with clubbing.¹

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Pachydermoperiostosis, or idiopathic hypertrophic osteoarthropathy, is characterized clinically by thickening of the skin of the forehead, face, and distal extremities, as well as clubbing, painful swollen joints, and excessive sweating. This disorder predominates in males at about the age of puberty and is familial in over 25% of cases.² Radiographically, extensive symmetrical periosteal reaction is seen involving the long bones of the extremities. Unlike the thin, linear periosteal response stimulated in this case, pachydermoperiostosis causes a thick, irregular reaction with cortical thickening and juxta-articular osteoporosis. Also the periosteal reaction of pachydermoperiostosis tends to involve even the most distal portions of the long bones.^{2,3} Thus pachydermoperiostosis is not the best diagnosis.

Thyroid acropachy is a rare complication of hyperthyroid disease characterized by exophthalmos, swelling of the hands and feet, and periosteal new bone formation. Pain and localized joint swelling are not seen. It usually follows ablation of the thyroid after a period of weeks to years. The periosteal reaction tends to be irregular and exuberant, with a lucent "bubbly" appearance, and spiculations may be present. Diaphyses of the small bones of the hands and feet are most often affected.^{2,3} The long bones of the forearm and leg are only rarely involved. Thus thyroid acropachy is not the best diagnostic choice in this case.

The combination of arthralgias, clubbing, joint swelling, and a generalized fine periosteal new bone formation involving the long bones of the extremities makes hypertrophic pulmonary osteoarthropathy (HPO) the best diagnosis.

Discussion

HPO is characterized clinically by digital clubbing and painful swelling of the joints of the extremities, as well as localized pain and tenderness of the limb bones. It is associated with a wide variety of pulmonary conditions which may be neoplastic, inflammatory, or suppurative, but when seen in adults, it is most often due to carcinoma of the lung. Figure 2 is the patient's chest film showing a right lower lobe squamous cell carcinoma, which was the etiology of this patient's HPO. Other intrathoracic causes of HPO include mesothelioma, metastatic sarcoma, empyema, subacute bacterial endocarditis, and aortic arch aneurysms. Cyanotic congenital heart disease has been described as an etiology of



Figure 2. PA chest radiograph demonstrating right lower lobe bronchogenic carcinoma.

HPO without a significant periosteal reaction. Pulmonary tuberculosis and metastatic bronchogenic carcinoma to the lung are very rare cases of HPO.^{2,4}

Extrathoracic causes of HPO include the various colitides, polyposis syndromes, biliary cirrhosis, and lymphoma, to name a few.²

The etiology of HPO is unknown but is thought to be neurogenic. The osteoarthropathy has been known to regress with vagotomy, removal of the primary lung lesion, and even exploratory thoracotomy without removal of the lesion.

Radiographically there are soft tissue signs of digital clubbing but usually no bony changes in the distal phalanges. Juxta-articular osteoporosis is quite common. The periosteal changes are in the diaphyses and metaphyses of tubular bones and usually spare the extreme bone ends, as seen in this case. Unlike the periosteal response typically seen in all the alternative choices in this case, HPO is characterized by a thin, linear periosteal reaction.⁵

DIAGNOSIS: (4) Hypertrophic pulmonary osteoarthropathy.

REFERENCES

1. Edeiken J, Hodes PJ: *Roentgen Diagnosis of Diseases of Bone*, vol 1. Baltimore, The Williams and Wilkins Co, 1973, pp 41-42.
2. Freiburger RH: *Bone Disease Syllabus*, series 2. Chicago, American College of Radiology, 1976, pp 248-261.
3. Greenfield GB: *Radiology of Bone Diseases*. Philadelphia, JB Lippincott Co, 1980, pp 490-491.
4. Holling AE: Pulmonary hypertrophic osteoarthropathy. *Ann Intern Med* 66:232, 1967.
5. Greenfield GB, Schorsch HA, Schkolnik A: The various roentgen appearances of pulmonary hypertrophic osteoarthropathy. *Am J Roentgenol* 101:927-931, 1976.

Stress Management Program

MARY JANE DEWEY, M.A. and JEFFREY S. HARRIS, M.D.

The Stress Management Program at the Tennessee Department of Public Health was developed as part of a new emphasis on primary preventive programs. It is offered to State employees as one effort of the health promotion section in the Bureau of Community Health Services Administration. There is a growing body of evidence that the worksite, where most adults spend the greatest part of their waking hours, is an appropriate and effective locale for preventive efforts.

It appears that many chronic diseases, such as coronary heart disease, ulcers and other gastrointestinal diseases, backache, hypertension, migraine, and general deconditioning may be triggered by or begin to be clinically significant as a result of the daily stressors most of us encounter. While each person reacts differently to objectively measured stressors, the physiologic and psychologic reactions to perceived stressors lead to impaired work performance and social interactions and then to deterioration of health. However, modification or reversal of the effects of stress may be possible if individuals are able to institute basic life style changes, use techniques to elicit the trophotopic or relaxation response, and receive support from people significant to them soon enough to prevent or help them recover from these potentially serious health problems.

The core of the program developed by public health staff is an intensive workshop for groups of employees who work together. For example, the executive staff of the Commissioner's Office comprised a group. A needs and preference survey among the group is done prior to the workshop. Group planning for change, with follow-up sessions and/or individual consultations for group leaders or managers, provides options and motivation to change some basic life styles and group norms of behavior. The active involvement of the leader of the work group is critical to the success of this program.

The program staff currently consists of a physician trained in preventive and psychosomatic medicine and a psychologist with experience in group process. Other staff who may be involved in different lengths and types of workshops include nutritionists, health risk reduction facilitators, and exercise specialists.

The objectives of the program are to (1) inform employees about the general health and stress level of their group by using survey feedback techniques, (2) help employees to help themselves, (3) improve employee morale by providing positive support, (4) improve productivity, (5) educate employees about habits that affect health, (6) expose employees to various stress reduction techniques and activities that have been proven to be useful and effective.

On the individual level, this program incorporates information and training about the physiology of the ergotrophic or stress reaction, and the trophotopic or relaxation response. Included is information on stressful or helpful nutrition practices and the benefits of exercise in modifying responses to stressors as well as increasing host resistance. Training includes goal clarification and time management and provides an overall health risk appraisal for each participant.

On the organizational level, the stress management program furnishes information and participatory training in organizational stressors and their modification. It provides information on the positive effects of group norms in supporting or defeating lower risk behaviors.

Preliminary evaluation of the Stress Management Program indicates positive effects on productivity, increased life and job satisfaction, decreased intra-unit conflict, and positive effects on health practices. It is premature to assess changes in health status or use of health services.

For further information about the program, please contact Dr. J. S. Harris or Ms. M. J. Dewey at the Health Risk Reduction Division, Tennessee Department of Public Health, R. S. Gass State Office Building, Ben Allen Road, Nashville, TN 37216.



From the Tennessee Department of Public Health, Nashville.



ALLEN S. EDMONSON

Pleasure

In every language there is a word or phrase which means "good feeling," or if you like, "feeling good." Quality of life is calculated by some as the sum of its many pleasures. There are many pleasures experienced by the President of the Tennessee Medical Association as his year in office unfolds.

First, it feels good to get elected; to find that your peers want you to serve. It feels good to be introduced and installed at the banquet of the annual meeting. It feels good to represent medical practitioners in Tennessee to the press, to TV, to the legislature, to medical educators, to politicians, to teachers, and many others. The loyalty and support of the auxiliary is a not unexpected pleasure. It's a pleasure to visit with county and regional societies and to attend the American Medical Association as President of the TMA. A lot of pride plus pleasure spills out at the formal installation of the AMA President as you stand on the platform in the spotlight as "Tennessee!" is called in the series of the 50 states.

These are "good feelings" for the President, for his ego; and there is no denying the personal pleasure.

Still there is one pleasure—the best, the biggest, the greatest—which is not only personal but also statewide. This is the pleasure which is felt when one of our TMA members cheerfully accepts a request to do a job for all of us. I know we have some of the busiest physicians in existence and also the most dedicated, yet when a request for their participation is made, negative responses are almost nonexistent. This spirit of cooperation, loyalty, and willingness to work can only make our great Tennessee Medical Association greater.

I have appreciated serving you this year and have enjoyed all the pleasures, especially the greatest ones. I'm sure George Holcomb will also, but he will find out for himself. I look forward to his capable leadership. May the pleasure last.

Allen S. Edmonson M.D.

THE NEW PRESIDENT



GEORGE W. HOLCOMB, JR., M.D.
NASHVILLE

GEORGE W. HOLCOMB, JR., M.D.

94th President—Tennessee Medical Association

The 94th President of the Tennessee Medical Association, George Whitfield Holcomb, Jr., M.D., exemplifies the essential ingredients for achievement in any profession, especially medicine: integrity, dedication, keen intellect, compassion, and a constant endeavor to perform his responsibilities in a professional manner. He brings to the office of President the excellence of credentials demanded by this 153-year-old Association.

A native of Nashville, Dr. Holcomb received his B.A. degree from Vanderbilt University in 1943, and in 1946 he received his M.D. degree from Vanderbilt University School of Medicine. He did an internship in surgery at Vanderbilt in 1946-47 and residency in surgery there from 1947 to 1949. From 1949 to 1952, Dr. Holcomb was in residency at Children's Hospital in Boston. He was certified by the American Board of Surgery in 1956 and was certified with special competence in pediatric surgery by the American Board of Surgery in 1976.

From 1952 to 1954, he was a captain in the U.S. Army Medical Corps and was chief of thoracic surgery at Osaka, Japan. He served with distinction and was awarded the Bronze Star Medal.

He was formerly chief of surgery at St. Thomas Hospital in Nashville, and vice-chief of surgery and president of the medical staff at Nashville's Baptist Hospital. He currently is a clinical professor of pediatric surgery at Vanderbilt University School of Medicine and a civilian surgical consultant to the U.S. Army, Fort Campbell, Kentucky. He also serves as an editorial consultant to the *Journal of Pediatric Surgery*.

Dr. Holcomb's memberships include the

American College of Surgeons, Southern Surgical Association, American Academy of Pediatrics (Surgical Fellow), American Medical Association, British Association of Pediatric Surgeons, and the Southeastern Surgical Congress. He was a member of the Board of Governors of the American Pediatric Surgical Association from 1975 to 1977 and was president of the Nashville Surgical Society last year.

Dr. Holcomb, a member of the Rotary Club, has given freely of his time in such civic service as the Board of Trustees of the United Givers Fund, Advisory Board of the Junior League of Nashville, and the Board of Trustees of Harpeth Hall School. Also, he serves as a member of the Official Board of the West End United Methodist Church of Nashville.

The 59-year-old pediatric surgeon is the author of 24 articles published in medical journals, and he wrote a chapter on gastrointestinal bleeding for a textbook of pediatric surgery.

He was president of the Nashville Academy of Medicine in 1974 and chairman of the Academy's Board in 1975. In 1978, he was elected to the Tennessee Medical Association Board of Trustees, and served as its chairman in 1978-79 and its secretary-treasurer in 1979-80.

Dr. Holcomb and his wife, the former Alice Ingram of Lebanon, Tennessee, have a son, George W. Holcomb, III, M.D., a second-year surgical resident at Vanderbilt University School of Medicine, and a daughter, Miss Virginia B. Holcomb, a graduate student in journalism at Northwestern University in Chicago.

The Tennessee Medical Association is especially well served in its choice of George W. Holcomb, Jr., M.D., as its 94th President in a year which promises to offer many challenges.

Journal of the tennessee medical association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson

WINSTON P. CAINE, JR., M.D., Chattanooga

GEORGE W. SHANNON, M.D., Jackson

DILLARD M. SHOLES, JR., M.D., Johnson City

FRANCIS W. GLUCK, M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

APRIL, 1982

editorials

Burnout

Every few years—maybe oftener—the taxonomists change the name of various microorganisms—or, perhaps better put, every year the taxonomists get together and change the name of a few organisms. Now I can see no reason why it is more appropriate to name the causative organism of plague after Yersin than

after Pasteur, yet we (they) now have changed *Pasteurella pestis* to *Yersinia pestis*. Nor can I see any reason why it is better to call the causative agent of typhoid fever *Salmonella typhi* than *Eberthella typhosa*. The taxonomists can, though. It is known as job protection.

Lest I leave the impression that I think this an exclusive characteristic of taxonomists, I hasten to point out that “bodies by Fisher” meant your cars looked different each year, and that even microscopes alternate periodically between rounded and squared body lines. And of course fashions in clothing are never even nearly static.

No group is more solicitous of its longevity than the gatherers and purveyors of what is generally—and frequently laughingly—referred to as “news.” Like a dog with its favorite bone, once those hardy and persistent creatures latch onto a tasty morsel, they hang on for dear life (existence), and milk it for all it’s worth. Recently they discovered “burnout,” which is something perhaps a few individuals actually do. But the media have taken it and made a catchword of it; even better, they have given us all a respectable cop-out.

Some years back a bunch of young firebrands decided they would no longer tolerate taxation without representation, and the 13 American colonies united to rebel against the mother country and establish their independence. Most of the leaders were in their 20s and 30s, and it is fortunate that they had a few “older” heads to keep their enthusiasm from undoing them (Washington was an old man of 44 in 1776). The patriarch was wise old Ben Franklin, who was 70 (John Hancock was 39, Jefferson was 33, and Alexander Hamilton 21). After the shooting was over, older and wiser, and less impulsive, they settled down to make their newfound freedom work.

About a hundred years later, give or take a few, some other young firebrands started a shoot-out with Federal troops in South Carolina, bringing to a head a sore that had been festering for several decades (the issue was the individual rights of each of the states that formed the federation). Those young-uns did not fare so well as their predecessors, and so after about five years of disaster those who were left went back to farming their land or running their businesses or whatever they did. Some of them made it and some didn’t, but they went on making do with what they had.

Most of life is somewhere in between “the

thrill of victory and the agony of defeat." You win some and you lose some, usually without either thrill or agony—maybe just satisfaction or disappointment; whichever way it works out, it frequently does so with a lot of frustration. When you are young, you blunt your tool a lot until you learn not to hit it so hard. It is not a matter of disillusionment—only of experience leading to moderation—a sort of change of tactics, you might say. Like the young bull and the old bull who—but that's another story.

Anyhow, I certainly am grateful to the media for filling me in. Otherwise I never would have known that when things don't go right, instead of thinking about why they didn't, and how to change them and make them work out better next time, I can simply spend my time thinking about how I'm burned out, and how therefore there need be no next time.

What the hell—I quit!

J.B.T.

Through A Glass Brightly

If there is magic on this planet
it is contained in water.

—Loren Eiseley

It might surprise most people, and even shock some, for the Apostle Paul to be referred to as a poet, and yet I defy you to find anywhere poetry more pure than his description of love in his letter to the church at Corinth. In it he explains that in this life we see things as "through a glass, darkly." He was referring of course to a looking glass, which in those days was made of polished metal, usually brass, and tended to distort the image significantly. Most people, therefore, had only a rather inaccurate, or at least incomplete, picture of themselves.

Narcissus, on the other hand, looked at himself in a mountain pool and, as punishment by Echo for having spurned her love, fell in love with his own image reflected there. Because he could not possess it, he pined away and turned into a flower. Though the story is, I should think, apocryphal, and there are some variations in its telling, it does show that the ancient Greeks knew a still crystal pool was the only place a true image could be reflected.

Looking through an album of my favorite

photographs, a colleague once commented that I must really like the water, as a very large percentage of my pictures featured it. Sure enough they do, and I do. Perhaps it is that I like seeing nature through a glass brightly, and perhaps it is a part of the magic of the water that it always shows, say, in a reflected sunrise or sunset, something that would otherwise have been hidden from view. By way of such reflection you can even look into the face of the sun itself.

There has apparently always been (I am not sure about the duration of "always" in this instance, but it is limited neither to this century nor to this continent) a running battle between those who have wished to preserve natural beauty, even wilderness, and those who count that as nothing where there is economic advantage to be gained from its destruction. Their argument is that as soon as people go into the wilderness to enjoy it, it becomes no longer wilderness, so why bother? In Europe, arable land has been scarce for centuries, and man has been forced to use his ingenuity to get the most out of it for the economy's sake and at the same time keep it beautiful to behold. On the other hand, it has been only within the last century we have had to concern ourselves with preservation of wilderness, as both in this country and elsewhere inaccessibility took care of that, and in fact wilderness was so abundant that its mere destruction constituted something of a challenge. Now, of course, we have the ability not only to reach but even to remove any mountain that exists, and it seems we are in fact on our way to doing so.

Whatever his views on wilderness or nature in general, however, it is a rare individual who is so insensitive as not to have found delight in a body of clear, cool water—a mountain pool, a rushing stream, a crystal lake—or the ever-changing seashore. Indeed, where these were not naturally available, as soon as he could do so man has always constructed fountains and pools to beautify his towns and cities. It is true they often—even usually—served utilitarian purposes as well, but he constructed his fountains of ornate masonry with statues about them, and surrounded them with flowers and shrubs, even sometimes adorning the water with lilies. Ovid, in his *Metamorphoses*, tells us that it was in fact in such a fountain that Narcissus saw his reflection, and found it so lovely he thought it was the reigning nymph of the place. He drowned trying to possess it. When the nymphs came to claim his

body, they found only a flower.

From the earliest of times water has been man's single most prized possession, even though we now take it for granted. The ancient Egyptians worshipped the Nile as the giver of life, and constructed irrigating systems to make the most of its annual flooding. In marvelous feats of engineering the Romans built huge conduits and aqueducts to bring water to their cities, and we have recently discovered that our Western, Mexican, and Central and South American Indians were at their most ingenious in developing means to conserve scarce rainfall and deploy it for encouraging their crops.

The day of reckoning is at hand. Even as we continue to destroy our lakes and streams with our chemical offal, communities and even states have gone to war with one another over water rights. Megalopolis on the Pacific has for decades drained from the entire area west of the Rockies water needed for the farms and herds inland, and Megalopolis on the Atlantic is now doing the same. We have had to negotiate a water treaty with Mexico over the flow through the Colorado, and even so, poachers are active in "skimming off the cream," so to speak. The problem has been compounded over the past few years by low rainfall throughout much of the world, and there is a proliferation of papers and projects on utilizing polar ice as a water supply, as well as on the desalination of sea water.

Yet we go right on polluting. It seemed some headway was being made in the past few years as Congress enacted laws restricting chemical dumping, and the Environmental Protection Agency was formed to enforce those laws. But as we Americans became sick unto death of over-regulation, everything done to protect our water and our wilderness has been overturned along with everything else, and our waters are dying (and not just "ours"—the Mediterranean, too, not to mention the oceans). It is a problem of all mankind; and all the while, over it all and into it all falls the acid rain. (A week or so ago a minute snow flurry left a spattering of goo on my windshield I could not see through, and could scarcely remove.)

Oscar Wilde, in his *Ballad of Reading Gaol*, opined that "each man kills the thing he loves (by each let this be heard). . . . The coward does it with a kiss, the brave man with a sword." As in the "man or mouse" story, there must in this case also be something in between.

We are killing our water by not "caring

enough to give our very best"—or even our very least. Most of us—that majority that could make the difference—just don't give a damn—and won't until it's gone.

J.B.T.



Billy Harold Copeland, age 44. Died January 26, 1982. Graduate of University of Tennessee College of Medicine. Member of Overton County Medical Society.

Daniel Davis, age 65. Died February 22, 1982. Graduate of University of Tennessee College of Medicine. Member of Knoxville Academy of Medicine.



The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

MAURY COUNTY MEDICAL SOCIETY

Mary E. Overton, M.D., Columbia

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

John F. Gwin, M.D., Memphis
Ralph F. Hamilton, M.D., Memphis
Penn Quork Joe, M.D., Memphis
Davis D. Moser, M.D., Memphis
James D. Saino, M.D., Memphis
Arnold R. Tag, M.D., Memphis
Joseph F. Weiss, M.D., Memphis
Wendell T. Wheat, M.D., Memphis

RUTHERFORD COUNTY/STONES RIVER ACADEMY OF MEDICINE

James L. Boerner, M.D., Murfreesboro

SCOTT COUNTY MEDICAL SOCIETY

Thomas K. Hall, M.D., Oneida

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Lakshman R. Nagalla, M.D., Bristol

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

Thomas R. Borthwick, M.D., Johnson City
Nora Nery-Manalo, M.D., Johnson City

WILSON COUNTY MEDICAL SOCIETY

Kenneth L. Wiley, M.D., Lebanon

TMA Members Receive AMA Physician's Recognition Award

Eighteen TMA members qualified for the AMA Physician's Recognition Award during January, 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Arthur G. Bond, M.D., Nashville
Charles H. Brunt, M.D., Memphis
Jackson Butterworth, M.D., Bristol
Stuart A. Frank, M.D., Chattanooga
Edmon L. Green, M.D., Nashville
Hoyt C. Harris, M.D., McMinnville
James W. Hays, M.D., Nashville
Ray W. Hester, M.D., Nashville
Frank E. Jones, M.D., Nashville
Ronald N. Maclean, M.D., Knoxville
Robert E. Maddox, M.D., Kingsport
Samuel O. Massey, M.D., Oak Ridge
Warren F. McPherson, M.D., Nashville
Peter A. Oliva, M.D., Johnson City
John C. Pryse, M.D., LaFollette
James R. Quarles, M.D., Springfield
John K. Rainer, M.D., Memphis
Terry P. Templeton, M.D., Memphis

Previously earned while out of state:

D.R.W. Shupe, M.D., Nashville

Monte B. Biggs, M.D., has been elected chief of staff at University Hospital in Knoxville. Other officers elected include C. Gerald Sundahl, M.D., chief of staff-elect; and Richard A. Fogle, M.D., secretary.

F. Hammond Cole, Jr., M.D., Memphis, has been inducted as a Fellow of the American College of Chest Physicians.

Hugh Francis, Jr., M.D., has been reelected chief of the medical staff at Methodist Hospitals of Memphis. Other officers elected include Joseph C. Loughheed, M.D., medical staff president; D. E. Snyder, M.D., vice president; Wade Murdock, M.D., president-elect; and Richard Raines, M.D., secretary.

Thomas P. Graham, Jr., M.D., Nashville, has been named chairman of the American Heart Association's Council on Cardiovascular Disease in the Young.

James R. Guyton, Jr., M.D., has been elected chief of staff at Fort Sanders Medical Center in Knoxville. Other officers elected include Elmer L. Treat, M.D., chief of staff-elect; and Archer Bishop, M.D., secretary.

Fred Haley, M.D., Franklin, has been certified as a member of the American College of Physicians and a Diplomate of the American Board of Internal Medicine.

William I. Mariencheck, M.D., has been elected chief of staff at St. Joseph Hospital in Memphis.

Oscar M. McCallum, M.D., Henderson, has been appointed to the Commission on Public Health and Scientific Affairs of the American Academy of Family Physicians.

Sam B. McFarland, M.D., Lebanon, has been honored as the "Alumnus of the Year" for 1982 by David Lipscomb College.

Leslie Milligan, M.D., Jefferson City, has been inducted as a Fellow of the American College of Surgeons.

Richard D. Pinson, M.D., Nashville, has been elected to a two-year term as chairman of the Davidson County Republican Party.

Donald Spencer, M.D., has been elected chief of staff at Haywood Park General Hospital in Brownsville. Other officers elected include John Thornton, M.D., vice chief of staff; and Clarey Dowling, M.D., secretary-treasurer.

Lynn B. Tepley, M.D., Chattanooga, has been certified as a Diplomate of the American Board of Internal Medicine.

John O. Williams, Jr., M.D., Mt. Pleasant, has been appointed to the Commission of Legislation and Governmental Affairs of the American Academy of Family Physicians.

personal news

Joel E. Avery, M.D., has been installed as the new chief of staff at Parkridge Hospital in Chattanooga. Other officers elected include Robert K. Berglund, M.D., vice chief of staff; and R. Leonard Carroll, M.D., secretary.

Jerome N. Barrasso, M.D., has been elected chief of staff at St. Francis Hospital in Memphis. Other officers elected include Eugene Spiotta, Sr., M.D., president-elect; and Thomas A. Currey, M.D., secretary.

Jeff Bethurum, M.D., has been elected chief of staff at the Williamson County Hospital in Franklin. Other officers elected include Starling Evins, M.D., vice chief of staff; and Douglas York, M.D., secretary-treasurer.

In accord with the Kiwanis Club's 1981-1982 theme, "Share Good Health," a number of local health professionals were honored for their volunteer health care service to underdeveloped countries at a recent Chattanooga club's meeting. As a result of their work in countries such as Bolivia, Zaire, Haiti, the Dominican Republic and others, the following physicians were recognized: *Robert S. Hellman, M.D., Jack D. Hixson, M.D., Gerald Jones, M.D., Robert Mabe, M.D., George Young, M.D.*

The following TMA members have been inducted as Fellows of the American Academy of Orthopaedic Surgeons: *William E. Matthews, M.D., and Thomas S. Templeton, M.D.,* both of Chattanooga.

medical news in tennessee

Meharry President Appointed

David Satcher, M.D., has been appointed to the presidency of Meharry Medical College. Chairman and professor of the Department of Community Medicine and Family Practice at the School of Medicine at Morehouse College in Atlanta, Ga., Satcher will be the eighth president of the only independent, predominantly black four-year medical school in the United States.

Dr. Satcher is a graduate of Morehouse College and received his M.D. degree and Ph.D. degree in Cytogenetics from Case Western Reserve University. He completed residencies in Medicine and Pediatrics at Strong Memorial Hospital, University of Rochester. He is a native of Anniston, Ala. He is married and has four children.

national news

From the AMA's Office in Washington, D.C.

New Budget Bucking the Tide

Congress has sent clear warnings to the White House that President Reagan's budget proposal faces stormy going on Capitol Hill.

Much of the lawmakers' concern centers on the size of the projected deficit—\$91 billion—but strong opposition has also surfaced to the new federalism

plan to turn major programs over to the states and to recommend slashes in domestic programs, including health.

Spearheading the fight for the administration's budget, David Stockman, head of the Office of Management and Budget, told Congress not to give up on President Reagan's proposals. He predicted in testimony before the Senate Budget Committee that Congress eventually will embrace most of the administration's program.

However, Stockman said the administration's position isn't inflexible. "I would dispel the notion that somehow we have said some things are nonnegotiable in any absolutely rigid sense."

A radical revision of the administration's program has been proposed by Senate Budget Committee Chairman Pete Domenici (R-NM), who has been a staunch supporter of the President. The senator proposed larger tax increases, smaller increases for defense and a freeze on most domestic programs.

The President's budget "fails to do enough to cut spending and accepts almost benignly what are malignant deficits" that could "crush any hope of economic recovery," said Domenici.

Meanwhile, Senate Finance Committee Chairman Robert Dole (R-KS), who will have a big say in the fate of health programs, said the battle over changes in the budget may reach a climax in April.

In addition to Domenici's alternative budget plan, Senate Majority Leader Howard Baker (R-TN) has suggested a temporary surtax on income to ease the deficit; and Ernest Hollings (D-SC) has recommended a freeze on defense increases, tax increases, and entitlement program spending.

The major economy proposed by the administration in health is a \$5-billion reduction in the rate of growth of the Medicare and Medicaid programs. The House Ways and Means Health Subcommittee will conduct hearings on this issue during the next month.

President Reagan's plan that would federalize Medicaid and turn major welfare and other health programs over to the states encountered resistance at the annual meeting of governors. However, the National Conference of State Legislatures approved the new federalism concept with the warning that each of its provisions must be carefully examined and negotiated. The state lawmakers also urged the government to federalize income maintenance and food stamps as well as Medicaid.

Budget chief Stockman said that if Medicaid is federalized the administration hopes to standardize services, but he told the governors there are no plans to radically change any of the program's provisions. He said it is not practical to have 30 optional services under Medicaid in one state and none in another.

Med Schools Pinched by Funds Cuts

The nation's medical schools fear the threatened squeeze on federal loan funds and aid for students could lead many students to drop out.

Loss of the guaranteed loan program for graduate and professional students would be devastating, according to Robert Boerner, director of the Division of Student Programs of the Association of American Medical Colleges (AAMC).

Noting that the administration proposal would hit the entire graduate and professional academic community, Boerner exclaimed "where the hell are we going to get the leaders of the country?"

The AAMC has been warning that the already-carried-out elimination of capitation aid for medical schools (federal grants based on number of students), plus the proposed curbs on federally aided loans, could make medical schools the province of only wealthy students.

Lower standards of admission, smaller classes, and slashed overhead costs may be in the offing. Some schools might not be able to survive the crunch, some AAMC officials have said. The number of applicants for schools is now the lowest it has been in ten years and may drop below two applicants per place. In some areas involving state residents and public schools, the ratio is one to one.

According to Boerner the federal graduate student loan program provides 78% of all loan money available to medical students with 72% of all students participating in such loans.

Not only is the subsidized graduate loan program in jeopardy, but the fall-back loan and aid programs are in trouble. The administration has proposed no further funding of the Exceptional Financial Need Scholarship Program which benefits 2% of medical students. The Health Professions Student Loan Program, utilized by about 5% of medical students, and the National Direct Student Loan Program, also about 5%, are recommended for cancellation.

These three loan programs account for 85% of all loan dollars available to the medical students, Boerner said.

The major remaining source is the Health Education Assistance Loan program (HEAL) which involves federal guarantees of loans from private sources. These loans are made at roughly the prevailing interest rates without any federal subsidy. The administration wants to limit this fund to \$80 million, Boerner said, but medical schools alone (other health schools also participate) estimate they will need more than \$110 million in fiscal 1983 "for this, the high cost loan of last resort."

announcements

CALENDAR OF MEETINGS

NATIONAL

May 2-3	American Laryngological Association—Breakers Hotel, Palm Beach, Fla.
May 5-6	American Society for Head and Neck Surgery—Breakers Hotel, Palm Beach, Fla.
May 5-8	Virginia Society of Ophthalmology and Otolaryngology, Inc.—Williamsburg Conference Center, Williamsburg, Va.
May 6-9	Christian Medical Society—Summit Hotel, Dallas
May 7-9	Society for Pediatric Radiology—Hilton, New Orleans
May 7-10	American Society for Clinical Nutrition—Sheraton Hotel, Washington, D.C.
May 10-13	Aerospace Medical Association—Sheraton Bal Harbour, Bal Harbour, Fla.
May 11-14	Society for Pediatric Research—Sheraton Hotel, Washington, D.C.
May 13-15	American Thermography Society—Georgetown University Medical Center, Washington, D.C.
May 14-15	Cystic Fibrosis Foundation—Sheraton Hotel, Washington, D.C.
May 14-16	American Society for Adolescent Psychiatry—King Edward Hotel, Toronto
May 16-20	American Urological Association—Radisson-Muehlebach Hotel, Kansas City, Mo.
May 18-19	Society for Surgery of the Alimentary Tract—Hyatt Regency, Chicago
May 22	Muscular Dystrophy Association—Sonesta Beach Hotel, Key Biscayne, Fla.
June 2-4	American Society of Transplant Surgeons—Drake Hotel, Chicago
June 6-11	American Industrial Hygiene Association—Convention Center, Cincinnati
June 13-16	American College of Surgeons—Salishan Lodge, Gleneden Beach, Ore.
June 15-18	Society of Nuclear Medicine—Miami Beach Convention Center
June 17-18	Society for Vascular Surgery—Sheraton Hotel, Boston
June 22-25	American Orthopaedic Society for Sports Medicine—Tan-Tar-A Resort, Osage Beach, Mo.
June 25-26	American College of Clinical Pharmacy—Crown Center, Kansas City, Kan.

SEMINARS FOR MEDICAL ASSISTANTS

Three one-day seminars, "Third Party Payors—Getting More Sooner," will be held on May 11-13, 1982, at St. Bartholomew's Episcopal Church in Nashville. Sponsored by the Tennessee Medical Association, the American Association of Medical Assistants/Tennessee Society, and the Nashville Academy of Medicine/Davidson County Medical Society, these seminars are designed for physicians' office personnel who are responsible for insurance claims processing. Emphasis will be on the following: Making Insurance Work for You, Step Savers in Claims Processing, When Insurance Pays and When It Does Not, and Why Code? Participants may attend three of the four sessions on Private Insurance, Medicare, CHAMPUS, and Medicaid. A registration fee of \$15.00 per registrant includes luncheon, breaks, and all necessary materials.

For information contact Mr. Thomas Wilkerson, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203, phone (615) 327-1451.

RATES REDUCED

FOR TMA MEMBERS, SPOUSES, & EMPLOYEES
GROUP TERM LIFE COVERAGE
AVAILABLE TO \$350,000

DOCTOR, TAKE TWO MINUTES TO REVIEW
THE NEW RATES
IT MAY SAVE YOU \$\$\$

Special Note to Professional Corporations: The premium can be a tax deductible expense for professional corporations. Ask us about the new paid-up at 65 option. Premiums are Tax Deductible for this option and not taxable to participants..

SEMI-ANNUAL PREMIUMS PER \$100,000 OF GROUP TERM LIFE INSURANCE INCLUDING WAIVER OF PREMIUM IN CASE OF TOTAL AND PERMANENT DISABILITY

Age Nearest Birthday	Male Premium Per \$100,000	Female Premium Per \$100,000
Under 30	36	30
30 - 34	48	42
35 - 39	78	54
40 - 44	132	90
45 - 49	216	148
50 - 54	372	248
55 - 59	600	432
60 - 64	900	716
65 - 69	1350	1196

If you are a member of the Tennessee Medical Association and you are under age 70 and actively at work, you may apply for any amount of coverage from \$25,000 to \$350,000 - **on yourself and/or your spouse**. Coverage is also available for your **employees in amount from \$10,000 to \$100,000**. Great-West Life Assurance Company of Winnipeg, Canada underwrites the plan and reserves the right to request evidence of insurability prior to issuing coverage.

TO APPLY OR TO OBTAIN ADDITIONAL INFORMATION
CALL THE PLAN ADMINISTRATOR:



INSURANCE PLANNING AND SERVICE COMPANY, INC.
822 McCALLIE AVENUE • P. O. BOX 1109
CHATTANOOGA, TENNESSEE 37401

FOR FURTHER INFORMATION CALL IPSCO

TENNESSEE RESIDENTS: 1-800-572-7389 — TOLL FREE

NON-TENNESSEE RESIDENTS: 0-615-756-2850 — CALL COLLECT

ASK FOR RON McCLISTER, T. GORDON LOWE, CHUCK HIGGINS,
OR GEORGE "CON" KNOX, JR., CLU

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brookes, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For further information and application, contact Continuing Medical Education, Vanderbilt University Medical Center, Nashville, TN 37232. Tel. (615) 322-2716.

Continuing Education Schedule

April 30	Annual Barney Brooks Lecture in Surgery (1 hour)
April 30-May 1	Southern Society of Clinical Surgeons and the H. Wm. Scott Society, Scientific Sessions
May 19-20	21st Annual Seminar in Psychiatry (for nonpsychiatrists) (11 hours)
July 7-10	Vanderbilt/Bowman Gray Annual Mountain Meeting (Internal Medicine)—Asheville, N.C. (12 hours)
July 27-31	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions

For information contact Division of Continuing Medical Education, Vanderbilt University School of Medicine, Nashville, TN 37232, Tel. (615) 322-2716.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashhurst, M.D.

Pediatrics.....	E. Perry Crump, M.D.
Surgery.....	Louis J. Bernard, M.D.
General.....	Charles E. Brown, M.D.
Neurological.....	David B. Todd, M.D.
Thoracic and Cardiovascular.....	Ira D. Thompson, M.D.
Urology.....	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

May 8	Financial Management—Atlanta
May 14-15	Hypnosis
May 22	Financial Management—Orlando
May 26-29	Rhinoplasty (cosponsored with Methodist Hospitals of Memphis)
July 21-24	Snowmass Cardiology Conference
Aug. 2-6	Practical Skills Workshop
Sept. 23-24	Newborn Conference
Oct. 1-2	Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)

Chattanooga

May 6-7	Summer Emergencies
June 3-6	Family Medicine Review

Knoxville

Nov. 6-7	Loss Prevention
----------	-----------------

Nashville

May 21-22	Loss Prevention
-----------	-----------------

World's Fair

June 10-12	Otolaryngology for the Primary Care Physician (K)
June 17-19	Great Smoky Mountain Pediatric Seminar (K)
June 20-23	Family Practice Update (M)
June 21-23	Great Smoky Mountain Pediatric Seminar (K)
Aug. 19-21	Cardiology Update (M)
Sept. 2-4	Perinatology for Practitioners (M)
Sept. 9-11	Perspectives in Medical Genetics—1982 (M)
Oct. 13-15	3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology (K)
Oct. 21-23	Office Ultrasound (K)
Oct. 27-30	Cancer Concepts (K)

(K) Contact the Knoxville office for information.

(M) Contact the Memphis office for information.

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

BAPTIST HOSPITAL OF NASHVILLE

May 1-2	Nashville Intraocular Lens Implant Course and Refractive Surgery Symposium—Baptist Hospital, Nashville. CME accredited. <i>Fee:</i> \$250.
---------	--

For information contact Celeste Thompson, Executive Secretary, Eye Foundation of Tennessee, 201 Mid-State Medical Center, Nashville, TN 37203, Tel. (615) 327-9151.

BAPTIST MEMORIAL HOSPITAL

April 30-May 1	Current Controversies in Chron's Disease
May 6-8	Gynecological Surgery
May 21-22	Hypertension: 1982

For information contact Educational Support Services, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146; or call toll-free 1-800-542-6848 if located in Tennessee, or 1-800-238-6893 if located outside Tennessee, and ask for Educational Support Services.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

May 23-28	13th Family Medicine Review—Session II
June 2-4	11th Update in Ob-Gyn
Oct. 31-Nov. 5	13th Family Medicine Review—Session III

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

July 26-28	Pediatric Update 1982—Kiawah Island, S.C.
Aug. 2-6	Taxes and Investments—Hilton Head Island, S.C.
Aug. 9-11	High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

The Violent Patient— Differential Diagnosis and Management

PAULINE L. RABIN, M.D., and JOHN KOOMEN, M.D.

Physicians perform frontline medical duty in dealing with violent patients in hospital emergency rooms. They must be adept at defining medical (organic) causes, determining whether mental illness is the underlying cause of violence, managing the violent patient, and suspecting the potential for violence in a subset of patients coming to the emergency room. A classification of the causes of violent behavior is given in Table 1.

Causes of Violence

Medical Causes of Violence

Drug Intoxication

Patients who are intoxicated by alcohol or other drugs have an increased potential for violence. Drugs include stimulants, e.g., amphetamines, and recreational drugs, e.g., cocaine and PCP (phencyclidine, or "angel dust"). A drug screen should be routinely done on all patients with violent behavior.

Drug Withdrawal

Patients in withdrawal may become agitated, threatening, and abusive. An extreme reaction is that of delirium tremens, an acute brain syndrome which develops three to five days following alcohol withdrawal (see below).

Side Effects of Prescribed Drugs and Over-the-Counter Drugs

Many drugs appropriately prescribed for defined indications may cause side effects leading to agitation and even violent behavior. Some of these drugs, e.g., antihistaminics, may be abused and in high concentrations have central nervous system effects. Side effects are usually, but not always, dose related. Sedatives are often unrecognized as an etiologic factor in violent behavior, but not uncommonly in the elderly these drugs can produce confusion leading to agitation and violence. Less well recognized is the excessive use and abuse of over-the-counter medications, many of which contain antihistaminics as the active ingredient, e.g., Contac®, Nyquil®, etc. When these drugs are abused they can produce an acute brain syndrome secondary to the anticholinergic properties of these drugs.

From the Vanderbilt University Medical Center, Nashville.
Reprint requests to Department of Psychiatry, Vanderbilt University Medical Center, Nashville, TN 37232 (Dr. Rabin).

Disorders of the Central Nervous System

Acute Organic Brain Syndrome (Delirium)

Delirium is an acute reversible reaction characterized by alterations in consciousness and attention, impaired orientation, illusions, unsystematized delusions, and visual hallucinations.¹ Emotional lability, restlessness, agitation, and violent behavior are frequently observed. The most common cause of delirium is high fever. The primary infection may be in the central nervous system, e.g., meningitis or encephalitis, or secondary to systemic infections, e.g., pneumo-

nia, or septicemia. Acute brain syndrome is also observed in alcohol withdrawal states (delirium tremens) and in toxic psychoses secondary to drugs.

Chronic Brain Syndrome (Dementia)

The syndrome of dementia is characterized by insidious onset of defects in memory, orientation, intellectual performance, mood, and judgment.² Misperceptions are common, and the resulting confusion may precipitate agitation and violent behavior. The chronic brain syndrome may be primary, such as Alzheimer's disease, or secondary to chronic disease, e.g., uremia, congestive heart failure, and anemia. The latter group causes a dementia that may be responsive to treatment of the underlying cause.

TABLE 1
CAUSES OF VIOLENCE

I. Medical Causes
A. Intoxicants
1. Alcohol
2. Stimulants (e.g., amphetamines and diet pills)
3. Recreational drugs (e.g., cocaine, phencyclidine, lysergic acid diethylamide)
B. Withdrawal States from Drugs, including Alcohol
C. Medical Drugs
Corticosteroids
Digitalis
L-Dopa
Diphenylhydantoin
Isoniazid
Anticholinergic Agents
Antihistaminics
Antabuse
Propranolol
Symmetral
Indomethacin
Bromocryptine
Sedatives (e.g., barbiturates, benzodiazepines)
D. Neurologic Disorders
1. Delirium
2. Dementia
3. Seizure disorders
a. Temporal lobe epilepsy
b. Post-ictal confusion
4. Head trauma and cerebral hemorrhage
a. Subdural
b. Subarachnoid
c. Intercerebral
E. Metabolic Disorders
II. Psychiatric Causes
A. Schizophrenia
B. Affective Disorders
C. Paranoid States
1. Primarily psychiatric
2. Secondary to medical causes
III. Antisocial Behavior (i.e., not attributable to any medical or psychiatric disorder)

Seizure Disorders

Temporal Lobe Epilepsy and Its Variants—Temporal lobe epilepsy, also known as complex partial seizures, typically has four components: sensory, psychic, autonomic, and somatomotor. Only rarely are the seizure movements elaborate or complicated, so that directed violence and aggressive behavior are rare. However, the episodic dyscontrol syndrome, which is probably a variant of temporal lobe syndrome, with EEG changes characterized by slowing and spiking in the temporal region, can produce violent behavior.³ The four clinical characteristics of this disorder are history of physical assault, sensitivity to alcohol, impulsive sexual behavior, and a history of traffic violations.

Post-ictal Confusional States—Following a grand mal seizure there is a post-ictal depression of consciousness, which includes drowsiness and confusion lasting minutes to hours. During this confused state patients may be belligerent.

Head Trauma and Cerebral Hemorrhage

Concussion, contusion, and cerebral or subarachnoid hemorrhage may cause confused and violent behavior.

Metabolic Disorders

Cerebral anoxia and acute glucose deprivation of the brain can produce aberrant behavior. This is seen in the organic hypoglycemia when the absolute blood sugar is very low, and also in diabetics in whom the blood glucose has fallen rapidly after the administration of insulin. When the metabolic rate is high, e.g., in brisk hyperthyroidism, relative cerebral anoxia may give rise

to the clinical picture of delirium. Many endocrinopathies produce a psychotic reaction, often with strong paranoid features, which in turn may provoke violent behavior.⁴ A similar picture which may be seen in Cushing's syndrome can also lead to frank mania, loss of control, and violent reactions.

Psychiatric Causes of Violence

Abnormalities detected in systematic examination of a patient's mental status should raise concern about the presence of underlying psychiatric illness. Schizophrenia and major affective illness (manic depressive illness), and paranoid states account for a large proportion of those mentally ill patients who display violence. The cardinal sign of psychosis will be present, namely loss of contact with reality. Mentally retarded persons may misunderstand or misperceive events, and in their frustration at their inability to communicate or comprehend a situation, may resort to aggressive and even violent acts.

Antisocial Behavior

Persons may display violent behavior in the absence of medical or psychiatric disturbance. The emergency room physician must differentiate between violence due to underlying medical or psychiatric causes, which requires therapeutic intervention, and behavior that violates the social code, which should be dealt with by law enforcement agencies. Social deviance is not considered a mental disorder.⁵

Management in the Emergency Room

The violent patient must often be subdued before he hurts himself or others. Until the patient is restrained, it is not possible to deal with the underlying cause of the violence. Many agitated and violent patients become calmer once in an emergency room, where they recognize that the medical personnel are in control and wish to help them.

The following approach is recommended:

First reassure the patient that the staff is in control and will not permit him to harm anyone.⁶ If he has a weapon, he should be disarmed, preferably by persuading him to give up the weapon voluntarily. Acknowledge his hostile feelings and allow him to talk about them. It is less inflammatory to acknowledge and discuss the feelings of

anger rather than the situation to which it is attributed.

Set limits for the patient by explaining what is permissible and what is not acceptable behavior. Respect his need for a "buffer zone"; do not approach too closely and do not make sudden movements or introduce procedures without explanation.

A frightened physician is ineffective, and conveys his anxiety to the patient. It is therefore helpful to have additional staff or security personnel present in the room when evaluating a potentially violent patient. Although a show of force may be all that is necessary to calm an agitated patient, some patients are too disturbed to comprehend this and will need physical restraint. The security guards are a critical part of the management team. They must be briefed on the patient's problem and how they will be able to help in treatment.

Physical restraints still have a practical place in the management of the violent patient,⁷ and may even be reassuring to the patient who is losing control. These should be applied in a non-punitive manner, and patients in restraints should not be left alone. If possible the physician who intends to evaluate the patient should not be involved in applying restraints. This should be handled by nurses and security personnel. Before a decision is made to remove restraints, the physician should consult with the emergency room staff who applied them, so they can describe the type of behavioral disturbance that necessitated their use. Restraints are frequently removed before the patient has been able to regain control. A patient requesting removal of restraints can be very persuasive, but not necessarily remorseful or in control, and a manipulative patient may try to bargain for partial removal of the restraints, for example "just release one leg," which could well provide the opportunity to lash out with the free limb. It is important to discuss the reasons for the use of restraints with the patient and the implications of removing them. Evidence that the patient understands events leading up to the use of restraints and exhibits evidence of recovering a degree of self-control will provide a sound basis for their removal.

Although the definitive handling of the violent patient has come to depend more on chemical than physical restraints, physical restraints are often necessary to provide an adequate opportunity to administer the necessary medica-

tion and allow it time to take effect. The physician is constrained from administering drugs without the patient's consent except under emergency circumstances. Violence constitutes such an emergency.

The use of high potency neuroleptics, such as haloperidol (Haldol), is advocated when chemical control is sought.⁸⁻¹⁰ Advantages of these agents are threefold: smaller doses are required (haloperidol is 50 times as potent as thorazine), and the injections are less painful; these agents are less narcotizing, which is especially important when the level of consciousness is being monitored; and there is less danger of hypotension. These medications can be safely given by intramuscular injection and the acute side effects (usually a muscular dystonic reaction) can immediately be treated with diphenhydramine (Benadryl) 50 mg intramuscularly or intravenously. The therapeutic plan should be spelled out clearly to the patient before any injection is administered, and the reason for the medication and the expected response to the medication should be explained. This will serve to allay the patient's suspicion and anxiety. Some patients, when offered a choice between an injection or oral medication, will agree to take a liquid concentrate, which is just as effective because it is rapidly absorbed.¹¹

It is salutary to recognize the factors which have been associated with assaults by patients on psychiatrists.^{12,13} Psychiatrists who have been assaulted have exhibited one or several characteristics. They have denied that confrontation with a violent patient is fraught with danger. They may have in some way communicated to the patient dislike of, contempt for, or anger with him, and in some cases have, by their own admission, been disrespectful towards the patient, thereby provoking violence.

The Potentially Violent Patient

Patients who have recently exhibited overtly violent behavior are usually brought to the emergency room by law enforcement officers or by family and friends, but others who have verbalized homicidal ideas or intentions but who have not been physically violent may come voluntarily, either alone or with family. In addition, the emergency room physician must always

be alert to patients who may exhibit violent behavior for the first time while they are in the emergency room.¹⁴

It is not always possible to predict violent behavior, but the most reliable predictor of violent behavior is a history of previous violence. All threats should be taken seriously, as they reflect the patient's underlying hostility and poor impulse control. Any patient intoxicated with alcohol or other drugs is disinhibited, will have poor impulse control, and may become violent. Confused patients may misinterpret events and become violent out of fear. This is often observed in the elderly with chronic organic brain syndrome, and in the hearing-impaired.

Representative Cases

Medical Cause of Violent Behavior: Hypoglycemia

A 56-year-old man, a prominent attorney, was brought to the emergency room late one afternoon. He had been representing a client in court for the entire day and had missed his lunch in order to resolve a technical problem associated with the trial. While addressing the jury, his speech became slurred, he became less coherent, adopted an aggressive stance, and then lunged out violently in an uncoordinated, nondirective manner. When his behavior became persistent, the judge ordered the security officers to restrain him. He remained combative and was brought to the emergency room still resisting violently, shouting obscenities, and using vulgar language. He was sweating profusely, his pulse rate was 130/min, and his temperature was subnormal. A blood sample was drawn and he was given 50 mg of 50% glucose IV, during which time he was physically restrained. Within three minutes of receiving the injection, his behavior changed dramatically. He became calm, coherent, and apologetic. His blood sugar was reported as 24 mg/dl. Subsequently he was found to have an unresectable islet cell tumor.

Psychiatric Cause of Violence: Manic-Depressive Illness

A 29-year-old white married man was brought to the emergency room by four policemen, who had been called by the patient's wife after he had become violent at home. The wife described increasing irritability and hyperactivity, with as little as three hours of sleep per night, high speed driving, excessive spending, and new business schemes. That evening she had expressed concern about his financial enterprises, which she viewed as very risky. He became angry and insisted that he would do as he saw fit. He gradually worked himself up into a rage and started to throw objects wildly, stating that he had purchased them and would do as he saw fit. The patient had had similar episodes in the past and the diagnosis of manic-depressive illness had been made. Subsequently lithium therapy was prescribed, but he discontinued it because "he felt so well." On mental status examination, the patient was a hostile man who was oriented in all spheres. He exhibited pressure of speech, loose associations, and grandiose money-making schemes. He was not hallucinating, but his concentration and attention were severely impaired.

Judgment was poor and he showed no insight with respect to his illness.

The patient required physical restraints and was eventually sedated with large doses of haloperidol by intramuscular injection.

Antisocial Behavior

A 29-year-old married white man was brought to the emergency room in handcuffs by the police, who had responded to a call from the man's wife. She had charged him with physical abuse following a domestic argument. The man and his wife had imbibed a few beers that evening but denied drug use. The patient was angry and hostile and threatened to "get back" at his wife for causing him to be arrested. Although the smell of alcohol was still on his breath he was not inebriated and his mental status examination and physical examination were both entirely normal. Blood alcohol levels were below 0.1 mg/dl. The wife had been severely beaten and required immediate surgical attention. When no medical or psychiatric cause for his violent behavior was ascertained, the police pursued charges.

Comment

The three cases are illustrative of the range of causes of violent behavior and highlight the necessity to consider a differential diagnosis which includes medical causes, psychiatric causes, and antisocial behavior. Skodol and Karasu¹⁵ studied 62 patients classified as violent in the emergency room of the Bronx Municipal Hospital Center. Sixty-five percent were considered to have major disturbances in perception, affect, and reality testing resulting from psychosis, intoxication and organicity; schizophrenia comprised the largest single group.

Conclusion

While psychiatric disturbances are widely recognized as causing violent behavior, we have

emphasized the importance of medical causes which should be considered when dealing with the violent patient. Also often overlooked is the fact that the cause may be neither psychiatric nor medical. Antisocial behavior is not a medical problem and requires the intervention of law enforcement agencies.

Acknowledgment:

This paper was supported in part by a training grant #2T01MH05135 from the National Institute of Mental Health.

REFERENCES

1. Wells CE, Duncan GW: Delirium. *Neurology for Psychiatrists*. Philadelphia. F.A. Davis Co, 1980, p 45.
2. Wells CE, Duncan GW: Dementia. *Neurology for Psychiatrists*. Philadelphia. F.A. Davis Co, 1980, p 77.
3. Bach-Y-Rita G, Lion JR, Climent CE, et al: Episodic dyscontrol: study of 130 violent patients. *Am J Psychiatry* 127:1473-1478, 1971.
4. Di Bella GAW: Educating staff to manage threatening paranoid patients. *Am J Psychiatry* 136:333-335, 1979.
5. American Psychiatric Association *Diagnostic and Statistical Manual of Mental Disorders*, ed 3. Washington, American Psychiatric Association, 1981, p 6.
6. Lion JR, Levenberg LB, Strange RE: Restraining the violent patient. *J Psychiatr Nurs*, Mar-Apr 1972, pp 9-11.
7. Lenefsky B, dePalma T, Locicero D: Management of violent behaviors. *Perspect Psychiatr Care* 16:212-217, 1978.
8. Donlon PT, Hopkin J, Tupin JP: Overview: efficacy and safety of the rapid neuroleptization method with injectable haloperidol. *Am J Psychiatry* 136:273-278, 1979.
9. Anderson WH, Kuehnle JC: Strategies for treatment of acute psychosis. *JAMA* 229:1884-1889, 1974.
10. Mason AS, Granacher RP: Basic principles of rapid neuroleptization. *Dis Nerv Syst* 12:547-551, 1976.
11. Dubin WR: Evaluating and managing the violent patient. *Ann Emerg Med* 10:481-484, 1981.
12. Lion JR, Pasternak SA: Countertransference reactions to violent patients. *Am J Psychiatry* 130:207-210, 1973.
13. Madden DJ, Lion JR, Penna MW: Assaults on psychiatrists by patients. *Am J Psychiatry* 133:422-425, 1976.
14. Rockwell DA: Can you spot potential violence in a patient? *Hospital Physician* 10:52-56, 1972.
15. Skodol AE, Karasu TB: Emergency psychiatry and the assaultive patient. *Am J Psychiatry* 135:202-204, 1978.

WHICH ONE'S THE DOCTOR?

What's happening to the personal relationship of the doctor and the patient? In the name of better patient care, education, and responsibility, are we interposing unit clerks, practical nurses, nurse technicians, social workers, room clerks, psychologists, pharmacists, dieticians, and utilization specialists between us and our patients? If that in turn sounds facetious to you, I ask each and every one of you to review any of the charts at our institutions and try to derive some sense of continuity in the general progress and care of the patient who is our primary responsibility. In an era where personal contact of the physician and the patient is of the greatest importance, we are proceeding along a path which seems to place greater distance between the patient and the physician.

David Masland, M.D., Chairman of the Board
Pennsylvania Medical Society Liability
Insurance Company
Pennsylvania Medicine (9-81)

Obstetrical Considerations for the Working Woman

STEPHEN S. ENTMAN, M.D.

Although there have always been pregnant women working in our society, it has only been in recent years that social and economic factors have made this an issue of great concern. In the past, the small number of pregnant women who worked were members of the socioeconomic and ethnic groups that were generally deprived, and this was just an additional area in which lack of concern was manifested. With the changes in the economic structure of the American family, changes in social roles, and increasing attention to women's rights, there are now approximately 30 million potentially fertile women working in the United States, yielding approximately 1 million pregnancies per year. The amalgamation of forces concerned with women's rights, labor issues, and occupational health and safety has forced physicians and employers to develop policies and guidelines concerning the health and protection of the pregnant woman and her fetus. Although congressional action has mandated that, for purposes of insurance, sick leave and job security, pregnancy and related conditions must be treated the same as any other disability, there are no strict definitions of maternal disability and no legislated time limitation. These decisions were left in the hands of the woman, her obstetrician, her employer and her company physician. Thus, it is incumbent upon that group to arrive at a strategy that balances the pregnant woman's general and obstetrical health with her social and financial needs and the needs of her employer.

Clearly, complete restriction of work activity for the employee might compromise her financially, and diminish on her employer's productiv-

ity. On the other hand, although modification of her job description may reduce her employability, it may be a feasible compromise for all parties. The key to developing an appropriate plan is the evaluation of the woman's general and obstetrical health and an understanding of her work environment. Even in a normal, uncomplicated pregnancy, alterations in physiology may affect the woman's ability to perform certain tasks. The nausea, vomiting, and fatigue of first trimester may force a temporary but total disability for some women. Intermittent syncope would contraindicate the use of machinery or ladders. The changes in girth and alteration in the center of gravity affect balance and ability to lift and maneuver, and this can predispose to falls and back pain. These symptoms, however, do not preclude all tasks indefinitely and periodic re-evaluation is necessary.

Pathophysiology of the Normal Pregnancy and the Impact of Exertion

During the first and second trimesters, there is a progressive increase in total blood volume, oxygen consumption, and cardiac output, ultimately to a 50% increase. These physiologic changes impinge on cardiopulmonary reserve and exercise tolerance even in normal women, but women with underlying cardiac or pulmonary disease or anemia can obviously have severely diminished exercise tolerance. The gravid uterus demands approximately 10% of cardiac output. Uterine blood flow is maximum when a woman is in the left recumbent position and it diminishes in either the supine or upright positions. Anxiety or stress may diminish uterine perfusion, and it can be further disrupted by significant exertion. Diminished uterine blood flow with its attendant myometrial ischemia can stimulate uterine contractions, further compromising placental perfusion and possibly even

From the Department of Obstetrics and Gynecology, Vanderbilt University Medical Center, Nashville.

Reprint requests to Department of Obstetrics and Gynecology, Vanderbilt University Medical Center, Nashville, TN 37232 (Dr. Entman).

progressing to premature labor and delivery. Despite this, however, as a general rule, most pregnant women can continue to work at most jobs throughout their pregnancy. Although some authors have suggested limiting the amount of weight the woman lifts, there are no hard data to support this kind of arbitrary restriction. Similarly, although there are some data to suggest that rest for two to four weeks prior to term increases birth weight, these are not substantial enough to mandate a preterm disability and most women are able to work to term. Good judgment, of course, is necessary, since a woman who is spending sleepless nights because of multiple "minor" discomforts of pregnancy should be restricted from activities that require intense concentration. This may require a modified job description to protect the woman and others from injury.

The Working Woman with a Complicated Pregnancy

A small minority of patients have significant underlying conditions that mandate significant restriction of work activities. Some medical conditions, e.g., migraine headaches, epilepsy, asthma, lupus, and ileitis/colitis, become increasingly symptomatic in some pregnant women. Although pregnancy may not otherwise be a restricting factor, the underlying illness does become a reason for modifying the patient's activities.

The greatest cause of neonatal morbidity and mortality is prematurity. Aside from the emotional toll, an extraordinary amount of effort and a great portion of the health care dollar is spent on the immediate care of premature infants and on the chronic care of the victims of the sequelae of the complications of prematurity. Thus it is incumbent upon us to sustain a maximum prophylactic effort to prevent this serious complication of pregnancy.

A woman with a history of one preterm delivery has a 10% across-the-board risk of repeating that event. After a second preterm delivery or with known and repetitive risk factors, e.g., uterine anomaly, fibroids, or incompetent cervix, the risk is even higher. Conditions that overdistend the uterus, e.g., hydramnios or multiple gestations, similarly predispose to premature labor, and although there is increasing use of β -adrenergic tocolytic drugs in all of these conditions, there is no substitute for bedrest with its

attendant increased uterine blood flow and decreased gravitational stress to the cervix.

Most episodes of intrauterine fetal demise are either unexplainable or result from cord accidents. For the woman who has had a previous unexplained fetal demise, or a repetitive cause for fetal demise (e.g., hypertension, diabetes), the risk of a repeat stillbirth is increased, and serious consideration should be given to maintaining a low-stress, high-rest lifestyle. This regimen essentially precludes working.

Underlying cardiopulmonary disease with exertional symptoms takes its toll both on maternal and fetal well-being. The risk of developing congestive heart failure with impairment of the maternal and uteroplacental circulation is a strong contraindication to exertion and thus to working. Underlying hypertension and systemic vascular disease, whether chronic, as in an essential hypertension or lupus, or acute, as in preeclampsia, diminish uteroplacental perfusion, thereby predisposing to growth retardation, premature labor, and placental abruption. Efforts to increase this perfusion by maximum bedrest are important.

Women with diabetes mellitus who do not have any evidence of vascular compromise can generally work until the last month of pregnancy. After that time, the increased risk of preeclampsia, the problem of maintaining euglycemia, and the need for an increased level of care with frequent prenatal visits are relative contraindications to continued work.

Women with anemia have diminished oxygen-carrying capacity. A positive contraction stress test can be elicited from the fetus of women who have hemoglobins of less than 8 gm/dl, and this sign of fetal distress corrects after transfusion. Additionally, women with hemoglobinopathies and small vessel disease due to sludging have a further diminished capacity for exertion. It is incumbent upon these women to carefully avoid activities that further stress fetal oxygenation.

Obviously, women with overt complications of the third trimester, e.g., premature ruptured membranes, labor, or bleeding, require special care. Although there is an increasing attempt to manage these problems conservatively without the delivery of premature infants, there is no place in the protocol for normal daily routine.

In all of the above situations, there is a significantly increased risk of maternal and/or fetal morbidity, and the balance of the multiple variables must be tipped in the direction of increased

rest. This essentially precludes most working situations. The long-term physical and financial interest of the family and society will be best served by these short-term sacrifices.

Environmental Factors for the Fetus

In any working situation, and indeed throughout the maternal environment, the risks of exposing the developing fetus to teratogenic, mutagenic, or carcinogenic agents must be carefully considered. The tragedy of an induced malformation in a child is unspeakable, and is no more palatable if the inducing agent is a prescribed medication, an industrial chemical, or a toxic gas in the atmosphere.

The list of known, proven teratogens is limited. The list of agents that are *potential* teratogens, however, may be infinite. There is relatively little delineation of the noxious effects of industrial and environmental agents, but examples of the types of agents and their effects is worthwhile. Heavy metals, dioxin derivatives, polychlorinated diphenyl compounds, and pesticides seem to have significant fetotoxic risk with increased rate of spontaneous abortion. Toxic gases, e.g., carbon monoxide, interfere with oxygen saturation in both mother and fetus, and may carry some risks to fetal development. The polycyclic aromatic hydrocarbons, such as benzpyrene, may have long-term carcinogenic effects to the fetus.

The increased rate of fetal loss among pregnant operating room personnel has been related to the presence of anesthetic gases in the ambient air. Similarly, exposure to excessive levels of background irradiation, whether medical or industrial, may have cumulative toxic effects or long-term carcinogenic impact on the fetus.

According to a policy statement by the National Council on Radiation Protection, the developing fetus can tolerate up to 10 rads without overt effects. Nevertheless, it is clear that exposure to

environmental irradiation should be avoided, and even indicated, diagnostic irradiation should be limited if at all possible.

The foregoing is not intended to be a compendium of environmental hazards. Rather, it should serve to sensitize the patient, her employer, and the physician to be alert to the wide variety of hazardous materials in the workplace and the home and to minimize the exposure to these agents.

Postpartum

The question about postpartum disability frequently arises. The approach should be individualized according to the patient, the course of her delivery and puerperium, her energy level, and the nature of her job. Although four to six weeks would be an entirely reasonable norm, a very energetic woman with a job requiring minimal exertion might well be able to return to work after two weeks, whereas a woman with significant operative morbidity associated with her delivery might require 10 to 12 weeks prior to resuming a strenuous job.

Summary

For the entire spectrum of the reproductive process, *individualization is the key*. Careful consideration of all the factors in a coordinated fashion, with input by the worker, the obstetrician, management, and the plant physician, should arrive at a strategy for protecting the health of the woman and her baby and preserving the productivity of her employer, and enhance the financial and social well-being of her family. A useful algorithm for establishing this type of strategy is offered in an ACOG technical bulletin.

SUGGESTED READING

1. Longo LD: Environmental pollution and pregnancy: risks and uncertainties for the fetus and infant. *Am J Obstet Gynecol* 137:162-172, 1980.
2. Kuntz WD: The pregnant women in industry. *Am Ind Hyg Assoc J* 37:423, 1976.
3. *Pregnancy, Work and Disability*. American College of Obstetricians and Gynecologists Technical Bulletin, no. 58, May 1980.
4. *Medical Radiation Exposure of Pregnant and Potentially Pregnant Women*. National Council on Radiation Protection, report no. 54, 1977.

CBO estimates it will use 8 million pages of computer printouts this year. That's an average of some 31,000 pages every working day, or enough to supply Congress with 400 million lines of numbers. It will take 25 tons of paper, enough to consume 425 trees.

Role of Brachytherapy in the Management of Recurrent Carcinoma of the Head and Neck

SUBIR K. NAG, M.D.; MANUEL VIDER, M.D.; CHARLES L. NEELY, JR., M.D.;
ALAN PRITCHARD, M.D.; and DOUGLAS L. TAI, Ph.D.

Introduction

A steady improvement in local control as well as long-term survival has been seen in head and neck cancer due to advances in diagnosis and surgical skills, the advent of modern high energy medical linear accelerators, and computerized treatment planning systems. However, local recurrences and distant metastases in the advanced tumors are still frequently encountered despite the use of radical surgery or radiotherapy alone. Of patients treated for primary lesions of the oral cavity, pharynx or larynx, approximately 30% to 50% will have recurrence of the disease. These patients do poorly, with a salvage rate of 0% to 20%.¹

The outcome of the treatment depends on various factors, such as the extent of the primary tumor, the condition of the regional and juxta-regional lymph nodes, and the absence or presence of distant metastases. The site of the primary tumor often determines prognosis, as tumors of the base of tongue, pyriform sinus and subglottic larynx tend to do poorly. With lymph node involvement, survival is further decreased by about 50%. Previous surgery alters blood supply and reduces response to radiotherapy and chemotherapy, and the nutritional status and psychological makeup of the patient also play an important role in the end result.

There are various methods of managing recur-

rent head and neck cancers. One may use surgery, external beam radiotherapy with photons, electrons, or neutrons, interstitial radiation implants, chemotherapy, radiation sensitizers, hyperthermia, and cryotherapy. In search of better clinical results, attempts have been made to combine two or more of the above modalities in a multidisciplinary management of the patient.

Surgical management is undoubtedly determined by local anatomical site, extent of tumor, and regional node involvement. Recent developments in this direction have been the improvement in surgical techniques such as regional skin and muscle flaps, microvascular free transfer, and internal prosthesis.² These allow the surgeon greater flexibility in treating primary lesions, but surgical resection of disease followed by various modes of radiation therapy has revealed itself as an effective means for palliation, and in many cases for definitive treatment or cure in patients who otherwise may face hopeless situations or functional deformities. As demonstrated by Wang³ there was a clear improvement in survival of patients with T₃ and T₄ head and neck tumors from 10% by radiation alone to 53% by the combination of surgery and radiotherapy.

The role of chemotherapy in head and neck cancers has been reviewed by Glick et al.⁴ Methotrexate, bleomycin and cis-platinum are active drugs when used as single agents. Combination chemotherapy has resulted in a high proportion of objective responders with about 20% complete remissions for short periods.

Several forms of radiation modalities are now available. The result with electron beam is com-

From the Departments of Radiology (Drs. Nag, Vider, and Tai), Medical Oncology (Dr. Neely), and Otolaryngology and Maxillofacial Surgery (Dr. Pritchard), University of Tennessee Center for the Health Sciences, Memphis.

Reprint requests to Department of Radiology, University of Tennessee Center for the Health Sciences, 800 Madison Ave., Memphis, TN 38163.

parable to that with photon beam, but, the electron beam offers the advantage of reduced complications because the beam penetration can be adjusted by the selection of desired electron energy. Neutrons have the advantage of being about twice as effective in killing hypoxic cells as photons. In a randomized trial with 161 patients, Catterall⁵ reported that complete regression of tumor was observed in 77% of patients treated by neutrons with only one tumor recurrence. On the other hand, complete regression was noted in only 43% of patients treated with photons, and tumor recurred in 15 patients. In general, complications were more severe in patients treated with neutrons. Good results have also been obtained with mixed photon-neutron beam. Fast neutrons are currently available in only a few major institutions and hence are not readily accessible for routine clinical use.

Various fractionation schemes have been designed and carried out in an attempt to improve clinical results. Multiple daily fractionation courses in combination with hyperthermia and radiation sensitizers appears to be rather effective at inducing a complete response.⁶

Another alternative currently being used is interstitial implants (brachytherapy), with or without supplemental external radiation.⁷ It has been generally accepted that there is a definitive relationship between local tumor control and the dose delivered, but the total dose delivered by external beam is limited by the dose constraint of the radiation tolerance of the normal tissue surrounding the tumor. It has been emphasized by Henschke and Hilaris⁸ that one cannot usually deliver external irradiation above 6,000 rad without late complications. With interstitial implantation, on the other hand, the local dose can be raised to 10,000 rad to a volume of 50 cm³ with a rapid fall-off of the dose in the surrounding tissue. The main advantage of brachytherapy is apparent—the ability to deliver a large radiation dose to a small volume without significantly exceeding normal tissue tolerance. The central hypoxic core which is radioresistant can receive a much higher dose than the peripheral, well-oxygenated radioresponsive cells. In addition, *geographical miss*, which is quite possible with external radiation, can be avoided.

In comparison to a surgical procedure, brachytherapy is of shorter duration and the recovery is faster. There is less distortion of nor-

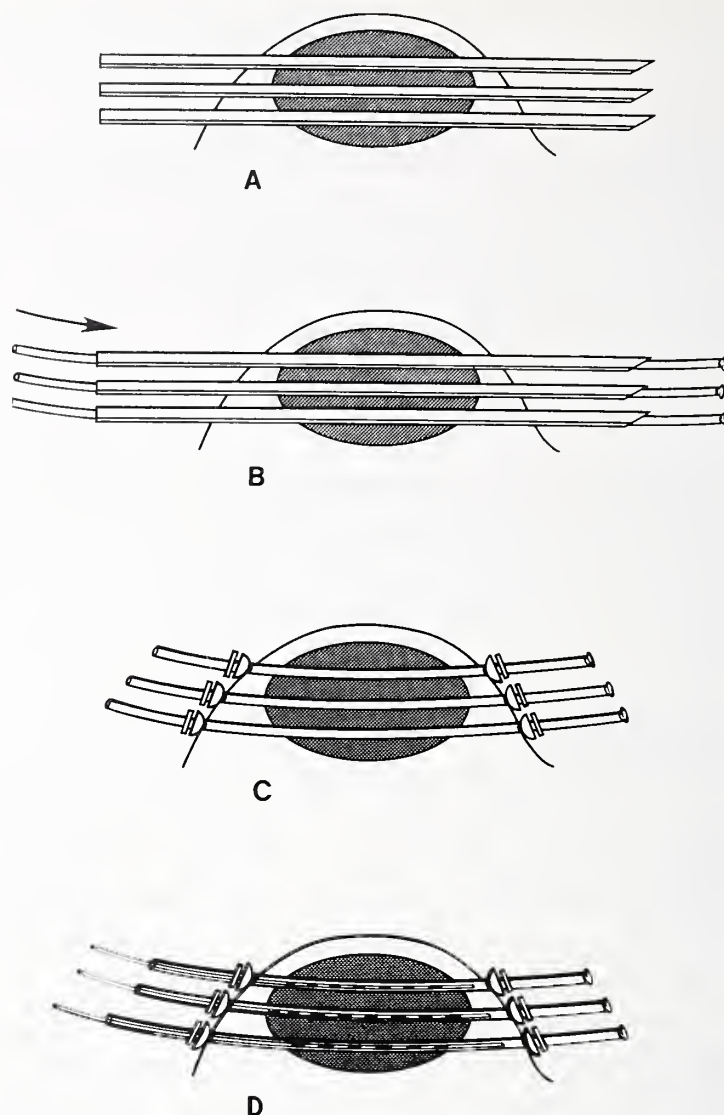


Figure 1. Illustrative procedures of iridium implantation. (A) Hollow stainless steel needles are first inserted into the tumor volume. (B) Polyethylene catheters are then inserted through the needles until they emerge from the opposite ends of the needles. (C) The needles are withdrawn, and the end of each catheter is fastened to the skin by a metallic or plastic button. (D) Dummy ribbons, ie, fine nylon tubes containing metallic seeds spaced at 1.0 cm apart from the center of one seed to another, are threaded directly into the previously implanted catheters.

mal anatomy, resulting in good cosmesis with no significant impairment of function. The drawbacks of brachytherapy include the specialized requisite skill for the radiation oncologist, and the radiation exposure received by all the involved personnel. Since the advantages of brachytherapy outweigh the disadvantages, we have recently used brachytherapy in combination with external radiation and chemotherapy in the management of recurrent tumors of the head and neck. The following case reports describe our recent experience in this area at the University of Tennessee Center for the Health Sciences. At this stage we are quite optimistic that a good number of these patients will be benefited by such combined modalities of treatment.

Material and Methods

Our approach in the management of the tumors of the head and neck is achieved by a multidisciplinary team that comprises the Head and Neck Surgery, Radiation, and Medical Oncology Departments with close collaboration in developing new combined modalities, including experimental clinical protocols.

Since many of our patients were previously treated with radiation, interstitial implants are often used with or without chemotherapy. An afterloading technique with iridium (Ir^{192}) is frequently used. With the patient under general anesthesia, the tumor is carefully palpated and the treatment volume is estimated to cover the entire tumor. Hollow stainless steel needles are first inserted parallel to one another, if possible, in one or two planes to encompass the tumor volume adequately (Fig. 1A). Polyethylene afterloading catheters are then inserted through the needles until they emerge from the opposite ends of the needles (Fig. 1B) which are then withdrawn, leaving the catheters in place. Each catheter has a steel wire in it to keep its lumen patent during manipulations. The ends of the catheters are fastened to the skin by metallic or plastic buttons (Fig. 1C).

After the patient recovers, dummy ribbons are inserted (Fig. 1D) and orthogonal radiographs are taken for dosimetric calculation, which in our case is handled by a TP-11 computerized treatment planning system. In a typical dosimetric computation, each dummy seed has to be identified from a set of orthogonal films and digitized into the computer. The contours of isodose-rate in rad per day are then generated in various directions of interest across the center of the tumor volume. To determine the time of treatment, the dose-rate contour that gives the best enclosure adequately covering the region of interest is selected.

While the dosimetric computation is under way, the patient is sent back to his room. The dummy ribbons are removed from the catheters, and the actual radioactive sources are then loaded. They will remain in place according to the treatment time that has been determined by the prescribed dosage and the dose-rate selected.

Case Reports

Patient 1: A 57-year-old man had a partial glossectomy with suprahyoid neck dissected three years ago for squamous cell carcinoma of the left lateral side of the tongue. When he developed a recurrence of tumor on the left lateral side of

base and dorsum of the tongue, he was treated with external radiotherapy of 6,000 rad in 30 fractions over 56 days by two lateral fields weighted 2:1 (left:right). Since the patient had residual tumor even one month after external radiotherapy, it was decided to implant the recurrent residual tumor with Ir^{192} .

The technique used was similar to the one described by Vikram and Hilaris.⁹ A bi-plane implant was performed with a total of ten vertical catheters crossed with two horizontal into a residual tumor located on the left side of the tongue. The two planes of ribbons were introduced from the left submental area into the tumor and then allowed to emerge from the dorsal surface of the tongue. A total of 81 seeds was loaded to deliver 3,700 rad calculated at the periphery of the target volume (Fig. 2). The patient tolerated treatment well. We emphasize that this is the minimum tumor dose, and most of the tumor received a higher radiation dose, especially at its center.

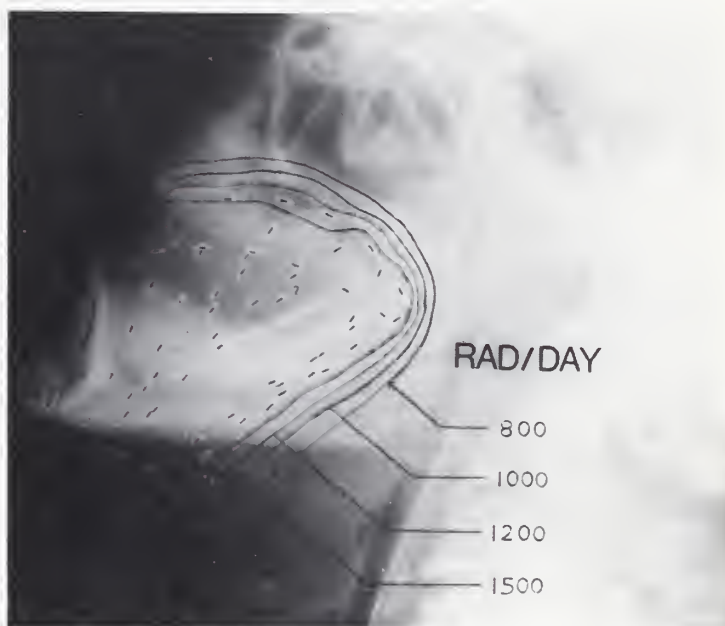


Figure 2. Lateral radiograph of an Ir^{192} implant of tongue, superimposed with the isodose-rate distribution that was generated by a TP-11 treatment planning system. All 81 seeds are identifiable (case 1).

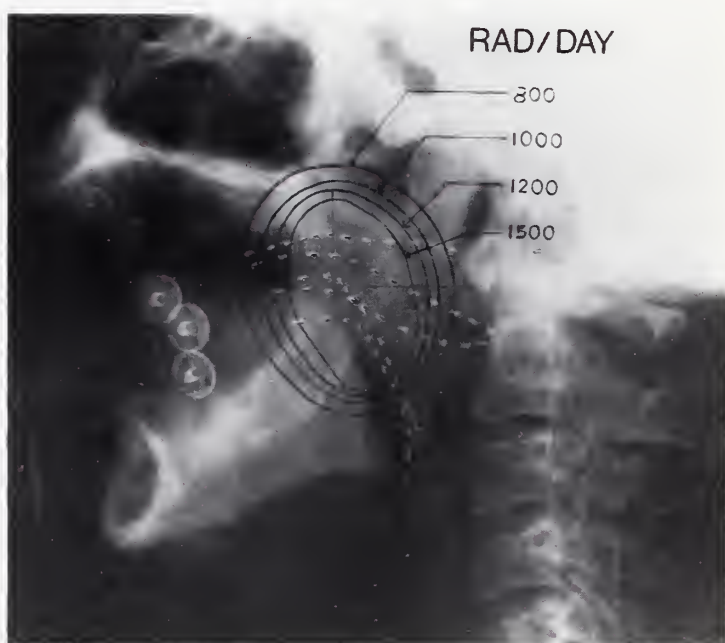


Figure 3. Lateral radiograph of an Ir^{192} implant of soft palate and the corresponding isodose curves. All 35 seeds were identified and marked for dosimetric computation (case 2).

Patient 2: Two years ago this 46-year-old black man had a complete resection of the left tonsillar fossa and left palate, with a left radical neck dissection, for a squamous cell carcinoma. He complained of a persistent sore throat, and a large, fungating and ulcerating mass was discovered in his left soft palate with extension to the left pharyngeal wall and the left base of the tongue.

He had an Ir¹⁹² implant, and the target volume was given a calculated dose of 4,500 rad at 1,200 rad/day to the periphery of the tumor utilizing five ribbons, a total of 35 sources. There was shrinkage of the tumor mass over a period of several months (Fig. 3).

Discussion

These cases illustrate how brachytherapy can be used in the management of recurrent head and neck cancers. Since most of these patients with recurrence have previously received external irradiation, additional dosage delivered by the external beam, ie, teletherapy, is rather limited. Chemotherapy is generally considered appropriate for treating metastatic disease. Radical surgery with its resultant cosmetic disfigurement may not be fully justified, or accepted by the patient. It becomes apparent then that brachytherapy is a logical alternative; it

not only delivers a relatively high dose to a small tissue volume, but also frequently offers long-term palliation and sometimes cure. Since patients with recurrent head and neck tumors face such a poor prognosis, the use of interstitial or external irradiation in combination with chemotherapy and hyperthermia¹⁰ may win a significant place in cancer therapy.

REFERENCES

1. Gilbert H, Kagan AR: Recurrence patterns in squamous cell carcinoma of the oral cavity, pharynx and larynx. *J Surg Oncol* 6:357-380, 1974.
2. Levine LA, Sessions DG, Ogura JH: Flap reconstruction in patients with head and neck cancer. Technique and results. *The Laryngoscope* 89:473-481, 1979.
3. Wang CC: Radiation therapy for head and neck cancers. *Cancer* 36:748-751, 1975.
4. Glick JH, Taylor SG: Integration of chemotherapy into a combined modality treatment plan for head and neck cancer. A review. *Int Rad Oncol Biol Phys* 7:229-242, 1981.
5. Catterall M, Bewley DK: Second report on results of a randomised clinical trial of fast neutrons compared with X or gamma rays in treatment of advanced tumors of head and neck. *Br Med J* 1:1642, 1977.
6. Arcangeli G, Barocas A, Mauro F, et al: Multiple daily fractionation (MDF) radiotherapy in association with hyperthermia and/or misonidazole. Experimental and clinical results. *Cancer* 45:2707-2711, 1980.
7. Seydel HG: Interstitial implantation in head and neck cancer. *Semin Oncol* 4:399-406, 1977.
8. Henschke UK, Hilaris BS: Interstitial radioisotope implantation in head and neck cancer, in Conley JC (ed): *Cancer of the Head and Neck*. Washington, Butterworths, pp 593-599.
9. Vikram B, Hilaris BS: A non-looping afterloading technique for interstitial implants of the base of the tongue. *Int J Rad Oncol Biol Phys* 7:419-422, 1981.
10. Johnson RS: Hyperthermia, still experimental, may win place in cancer therapy. *JAMA* 245:1109-1116, 1981.

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

Elevated CSF Protein in Uremia and Dehydration

SETHUMADHAVAN V. SOLAMMADEVI, M.D.

Cerebrospinal fluid (CSF) protein in uremia is known to be "abnormally" elevated. Schavwitz,¹ Goel and Lindsay,² Freeman et al,³ and Raskin and Fishman⁴ report values of CSF protein ranging between 45 and 175 mg/dl in patients with uremia. In hypertonic dehydration in children, CSF protein has been noted in the 300- to 400-mg/dl range, but no similar findings have been observed in the adult patient.¹ We report a patient with uremia, dehydration, and elevated CSF protein in the absence of any neurologic abnormalities.

Report of a Case

A 78-year-old man admitted because of confusion and dehydration was ambulatory until two weeks prior to admission. Initial physical examination revealed hypothermia, blood pressure 130/80 mm Hg, pulse 80/min, respirations 36/min, and evidence of severe dehydration including very poor skin turgor and dry mucous membranes. There were no fundoscopic abnormalities, evidence of trauma, nuchal rigidity, or focal neurologic defects. Examination of lungs, heart, abdomen, and prostate were unremarkable. Initial laboratory data were as follows: hemoglobin 6 gm/dl, hematocrit 20%, WBC 20,700/cu mm, BUN 300 mg/dl, creatinine 14.6 mg/dl, glucose 135 mg/dl, sodium 144 mEq/liter, potassium 8.6 mEq/liter, CO₂ 3 mEq/liter, calcium 6.5 mg/dl, serum protein 6.1 gm/dl, albumin 2.9 gm/dl, arterial blood pH 7.0, Pco₂ 18 mm Hg, Po₂ 115 mm Hg. EKG showed peaked T waves and QT interval of 0.64 seconds (rate 80/min). A lumbar puncture was performed and clear fluid with an opening pressure of 70 mm H₂O was obtained. CSF glucose was 105 mg/dl with protein 329 mg/dl. The spinal fluid showed RBC 316/cu mm. Blood, urine, and CSF cultures were sterile. PPD was negative.

The patient was vigorously treated for acidosis, hyperkalemia, hypocalcemia, dehydration, and anemia. His condition improved, and no focal neurologic signs appeared. Nine days after admission repeat blood chemistries showed BUN 140 mg/dl, creatinine 7.4 mg/dl, sodium 136 mEq/liter, potassium 4.6 mEq/liter, chloride 98 mEq/liter, CO₂ 21 mEq/liter, glucose 95 mg/dl, calcium 4.1 mg/dl, serum protein 5.5 gm/dl, albumin 2.6 gm/dl, serum pH 7.37. Repeat lumbar puncture

showed clear fluid with opening pressure of 130 mm H₂O, CSF glucose 54 mg/dl, CSF protein 43 mg/dl, RBC 250/cu mm, WBC 0. Lumbar puncture at 23 days after admission showed CSF protein 43 mg/dl with no cells; serum creatinine and BUN were unchanged from day 9.

Further investigation, including cystoscopy, revealed the renal failure to be secondary to bilateral ureteral obstruction caused by a papillary carcinoma of the bladder. EEG and brain scan were normal. The patient's condition deteriorated in spite of adequate supportive therapy and he expired on the 24th hospital day.

Postmortem examination showed papillary carcinoma of the bladder involving the trigone, with obstructive uropathy. An inactive tuberculous lesion in the left upper lung was found, and a small peripheral bronchogenic carcinoma was noted in the left upper lobe. The brain, meninges, and spinal cord were normal on multiple cut sections.

Discussion

Schreiner and Maher⁵ found that 30 of 52 patients with uremia had CSF protein greater than 60 mg/dl, 19 of 52 greater than 80 mg/dl, and 11 of 52 greater than 100 mg/dl. In a study of CSF in uremic patients, Freeman et al³ noted that the protein range was 40 to 175 mg/dl, with the highest CSF protein of 175 mg/dl being found in a case of acute glomerulonephritis with a BUN of 265 mg/dl, creatinine of 20 mg/dl. In Freeman's cases the elevated CSF protein returned to normal limits after treatment of the acute episode.


We believe that CSF protein of 329 mg/dl represents a level not previously associated with uncomplicated uremia and dehydration in adults. We feel it is important to bring this finding to the attention of physicians so that prolonged and possibly hazardous neurologic investigation can be deferred, pending rehydration of the patient with uremia.

REFERENCES

1. Schavwitz BA: Extreme elevations of cerebrospinal fluid protein associated with hypernatremic dehydration. *Am J Dis Child* 120:84, 1970.
2. Goel KM, Lindsay M: Raised protein in hypertonic dehydration, letter. *Br Med J* 1:571, 1972.
3. Freeman RB, Sheff MF, Maher JF, et al: The blood-cerebrospinal fluid barrier in uremia. *Ann Intern Med* 56:233, 1962.
4. Raskin NJ, Fishman RA: Neurologic disorders in renal failure. *N Engl J Med* 294:146, 1976.
5. Schreiner G, Maher JF: *Uremia: Biochemistry, Pathogenesis and Treatment*. Springfield, Ill, Charles C Thomas Publisher, 1961.

From the Department of Medicine, Mt. Sinai Services—City Hospital Center and the Mt. Sinai School of Medicine of the City University of New York. Dr. Solammadevi is now a Fellow with the Department of Gastroenterology, Vanderbilt University, Nashville.

Reprint requests to Veterans Administration Medical Center, 1310 24th Ave. South, Nashville, TN 37203 (Dr. Solammadevi).



**One of these
men has a
problem...**

and so do his family and colleagues.

There are special considerations in the treatment of professionals and executives who are impaired through dependency on drugs or alcohol: not because the patient or his addiction is different from others, but because of the strict sanctions imposed by the public and professional communities.

The A & D Center specializes in the treatment of the professional or executive who is chemically dependent. Treatment at the Center is designed to provide complete medical and counseling services, with care, dignity, and confidentiality for the patient. Family care and aftercare are emphasized, and specific plans are made for the re-entry process.

The A & D Center, located at the modern, 162-bed Doctors Hospital in Jackson, offers a 96-hour evaluation program, with the total inpatient treatment program extending for thirty days. For further information on the A & D Center, contact:



Doctors Hospital A & D Center
2969 University Drive
Jackson, Mississippi 39216
(601) 982-8321

Health Manpower

Introduction

During the last decade, the Association has monitored and analyzed manpower developments. In 1971, the House of Delegates adopted "Physician Manpower and Medical Education." A second report, "Physician Manpower and Medical Education, II," was adopted in 1978. This report is the third in that series. These reports, and the recommendations they contain, outline Association efforts to influence national policies affecting the production and distribution of health care resources.

In the last decade there have been dramatic increases in health manpower resources: (1) The number of physicians has grown faster in the 1970s than in previous decades, increasing significantly more rapidly than the population as a whole. (2) There has been even more rapid growth in the number and types of allied health manpower. Since these changes inevitably affect the practice of medicine, Association policy must be reviewed for its relevance in this altered environment.

The rising cost of medical education is another aspect of recent history that motivates this reassessment of AMA policy. As the federal and state governments have reviewed their spending priorities, they have reduced support for medical education. Medical schools and medical students alike have felt the effects of reduced funding levels. Because the graduates of the medical education system are a primary determinant of the future supply of services, the Association must develop policy that can address this new set of issues.

The principles presented in this report are similar to those enunciated in the two reports of the previous decade as well as earlier statements of AMA policy. In addition to examining medical education issues, however, this report focuses on the role of health manpower in the production and allocation of medical services. The emphasis has changed in order to adapt the Association's basic philosophy to rapidly changing external events. As a group, the principles in this report are based on respect for individual decision-making and market processes, commitment to quality medical education in a pluralistic society, and recogni-

tion of the appropriate role for allied health manpower.

In developing this report, the Board has paid careful attention to the issues of centralized versus decentralized decision-making; physician population—size and composition; medical education—autonomy, quality, and finance; and allied health manpower—roles and distribution. The body of this report contains explanatory material about each of the principles grouped in the four issue areas. The implications for AMA programs are described in the concluding section.

Approaches to Manpower Issues: Centralized Versus Decentralized Decision-Making

AMA's concern with health manpower issues grows out of the more general desire to provide quality medical care to the American people. The distribution of medical services is inextricably linked to the distribution of physicians and allied health personnel. Thus, the career decisions of these professionals are critical in all manpower issues and in the provision of medical services to the public.

Recognizing the difficulty of responding to the complex health care needs of the public with centralized planning, the AMA has a long tradition of favoring a decentralized approach to health manpower issues. There is, however, awareness of the special nature of the medical care sector. The high value placed on medical care in this country is the reason for extensive professional self-regulation and licensure. Beyond those quality assurance activities, support for maximum individual autonomy is basic to AMA policy.

The Association's commitment to quality medical care and quality medical education is independent of any manpower requirements. Criteria for accreditation of medical schools and residency programs are based on professional judgments of appropriate educational standards. These standards are not adjusted to reflect changing societal conditions. Instead, organized medicine upholds a fundamental professional responsibility to ensure that only qualified individuals enter the practice of medicine.

The term "market" is used throughout this report and needs further explanation. In general, a *market involves decentralized decision-making by buyers and sellers*. These decisions are *voluntary choices* for both parties to any exchange of goods and services. The situations that occur in the exchange of particular goods or services give rise to a wide variety of institu-

This is AMA Board of Trustees Report C, submitted to the House of Delegates at its Interim Meeting in December, 1981. Past House Action: A-81:243.

tional arrangements in different markets. Many of these arrangements help to coordinate buyers' (consumers') and sellers' (providers') decisions and ensure that their choices are mutually consistent. Unfortunately, the complexity of the institutional interactions can often obscure the fact that markets, even those in the medical care delivery system, ultimately respond in predictable ways to the underlying forces of supply and demand.

There are several markets that constitute the medical care delivery system, including the markets for health care services, health care employment, and health professions education. Taken together they form *a self-adjusting mechanism for determining the flow of resources in the medical care delivery system*. These market mechanisms function by producing signals in the form of professional and economic incentives for health care providers and consumers. If freed from extensive government regulation, these markets can provide an environment in which cost-effective medical care is the rule rather than the exception.

For example, physicians choose a location or specialty based in part on their perceptions of the current and future professional outlook. Their choices will be guided by the same factors that a centralized agency would attempt to consider: the potential patient population, the ability of an area to support the practice, the degree of professional support, and the extent of related health facilities. However, because individual physicians have a personal interest in the success of their decisions, they, as opposed to a centralized planning agency, are more likely to seek and utilize relevant information.

The market for medical care is complicated by the prominent decision-making roles played by institutions such as insurance companies, hospitals, and government. Each of these institutions may facilitate or impede market processes, but they cannot alter some of the fundamental interrelationships. For example, increasing supply of services relative to demand will adversely affect existing suppliers, regardless of the institutional structure.

The government as a purchaser of services has a legitimate role in the market. Society may choose to help the financially disadvantaged by instituting government programs that subsidize their access to medical care. The AMA has supported these activities under certain circumstances. Governmental reimbursement policies in these programs, for example, will affect behavior through a market process. The fact that its internal decisions involve a political element in no way makes the government an inappropriate participant in the market.

Support of basic medical research is another legitimate role for government. In the past public support for medical research has been funded, in part, by the payment for medical services provided by teaching hospitals. Should reimbursement policies or government subsidy programs change substantially, then alternative methods should be found to finance basic research. Thus, a limited, legitimate role for government does exist. However, if government attempts to constrain the behavior of other market participants, its action would impede market processes.

In a different context, the "market" for medical

education involves institutional participants—medical schools, teaching hospitals, individual residency programs, accrediting agencies, and the government—in a lengthy process that tends to increase the time necessary to respond to market changes. The complexity of the system and existence of substantial time lags do not negate market forces. In fact, the ultimate effects of market forces will be, to a considerable degree, independent of the institutional arrangements.

Interested public and private organizations can make a valuable contribution to this market process. In order to respond quickly to changing incentives, providers and consumers rely on the information that is available to them. The accuracy of the information and the speed with which it is disseminated are important aids to market mechanisms. In particular, *the AMA can play an important role in facilitating the workings of the markets in the medical care sector, even though it is neither a buyer nor a seller*. To facilitate an appropriate allocation of medical care resources, the Association can provide relevant information to other participants more directly involved and represent physicians-in-practice as well as in-training to other involved institutions.

A troubling aspect of the changing environment is the stress that has grown among groups of physicians. The allocation of hospital privileges is a decision that often involves conflicts among some groups of physicians. These conflicts may intensify because of increased supply relative to demand. The AMA can facilitate the market solutions to these issues by aiding the communication between different factions.

The AMA recognizes that the current economic environment has caused and will continue to cause unmet expectations for many participants in the medical care sector: physicians, medical students, medical schools, the government, and the public. Each of these groups seeks a satisfactory resolution of its potential problems. In particular, some would prefer that there be more direct control over the allocation and distribution of health care resources.

It is preferable, however, to rely primarily on market mechanisms rather than regulatory alternatives to accommodate these often conflicting desires and bring about an adjustment to shifting external circumstances. Under regulation the resolution of conflict is essentially political, often depending on the size of the affected group. In addition, regulation, far from eliminating adjustment problems, has frequently exacerbated them. *Those physicians and providers of medical care who have experienced difficult adjustments to changing market forces should not be misled into believing that a regulatory solution exists.*

Principle 1: In the absence of extensive regulation, the dynamic forces of the marketplace produce major incentives for the appropriate production and distribution of medical care services. The AMA supports the operation of self-adjusting market mechanisms that are consistent with medical care.

Physician Population

Groups with different perspectives have been monitoring changes in the delivery of medical care. Most recently, under government auspices, the

Graduate Medical Education National Advisory Committee (GMENAC) investigated the topic of health manpower supply and issued a report stating that there will be a substantial surplus of physicians by the year 1990. GMENAC's conclusions were derived from the application of a technically sophisticated but traditional approach to manpower problems. Fundamentally, the analysis used by GMENAC consisted of an attempt to project future health care "needs" and compare them with the expected future supply of physicians' services. The GMENAC definition of health care "need" represented a middle position between what they believed was needed and what was reasonably achievable.

Using variations of the traditional manpower approach to forecast the future status of physician manpower may lead to an underestimate of the ability of the health care delivery system to adjust to a changing environment. There is significant interaction among the various components of the changing environment, including interaction among new technologies, revised concepts of adequate health care, innovative practice management approaches, and the growing supply of physicians and allied health care professionals. The result may be a medical services marketplace radically different from the one assumed in the GMENAC projections. As a result of these reservations, the AMA does not believe that highly centralized manpower planning in general, and the GMENAC approach in particular, is an appropriate way to address the issues facing the nation.

Nonetheless, the rapid rise in the number of physicians in the past decade has been well documented. The number of nonfederal physicians per 100,000 civilian population has risen from 152 in 1971 to 194 in 1979. The physician shortage proclaimed by the 1959 Report of the Surgeon General's Consultant Group on Medical Education (the Bane Report) and the 1970 Report of the Carnegie Commission on Higher Education is no longer so apparent. This was perceived by the AMA-sponsored National Commission on the Cost of Medical Care which produced one of the first major reports to note the changing trend. The capacity of the physician population to meet demands for medical care is substantially better than before, and current trends are likely to continue in the near future.

As the conclusions of various public and private health manpower commissions have shown, forecasts of needs and future demand are fraught with difficulty. Changing public policy and technical innovations can dramatically alter the perceived medical need for the population. For example, the implementation of the Medicare and Medicaid programs and the development of the Salk and Sabin polio vaccines illustrate how rapidly and unexpectedly demand for medical care can change. The changes are not limited to overall increases or decreases; the demand for different types of health manpower can shift dramatically with no overall modification.

On the supply side, it is evident that physicians respond to the incentives in the current medical and economic environment: (1) Prospective medical students, particularly those from low-income families, are beginning to question their abilities to complete a medi-

cal education, given the recent reduction in scholarships and subsidized loans and the rapid increase in medical school tuition. These circumstances may make medicine a relatively less attractive career alternative. (2) Physicians completing their graduate medical training are taking longer to find satisfactory first practice positions, due to the rising cost of establishing a medical practice. (3) Younger physicians are foregoing careers in medical research partly because of decreased federal funding. In addition, if the quality of the work environment experienced by older physicians deteriorates, the number opting for early retirement is likely to grow.

These examples of responses to market forces show that long-run projections of physician manpower demand and supply are vulnerable to unexpected events and changing circumstances. The persistence of these fluctuations confirms the wisdom of the health manpower policy that the AMA adopted in 1951 ("AMA Policy Regarding the Production of Physicians").

Markets can favorably or adversely affect participants; these positive and negative incentives are essential for the market to efficiently allocate resources. The increase in the number of physicians has not been uniform in terms of either specialty or geography. Thus, allowing the market mechanism to work may adversely affect some physicians. Some may find themselves located in an area with many other physicians who are trying to serve the same patients; experience fewer patient visits and lower incomes; or discover that demographic shifts, insurance reimbursement policy changes, or shifts in demand make their current specialty less attractive than previously. These circumstances may not be pleasant, and appeals to the common good produced by the market will do little to assuage those directly affected.

Rather than passively waiting for market forces to operate, however, organized medicine should actively assist physicians in identifying those geographic areas desiring physicians and assist physicians in responding to those desires. In addition, organized medicine should provide communities with assistance in attracting physicians and making medical practice in their areas feasible and practical.

Principle 2: The numbers of physicians should, insofar as possible, be determined by processes of the market. The AMA will help physicians adjust to changing circumstances. This commitment entails the collection, analysis, and dissemination of information required by physicians and other market participants in order to make informed decisions.

Medical Education

Medical education determines the future of medicine in the United States through its impact on the number of physicians being trained, the quality of the training they receive, and the focus of the training on broad-based or specialty activities. Because of the length of time between admission into medical school and establishment of a practice by a new physician, any policy changes made in this process necessarily yield results only after a time lag as long as seven to ten years. The existence of this long lag does not mean that market forces are not operating. Those forces are

at work, affecting the choices of both students and schools. The effects, however, are seen years after the initial stimulus.

Although there is a long interval between the entrance of a new student into medical school and the establishment of a medical practice at the completion of training, students have considerable flexibility during that period. The choice of specialty, for example, is typically accomplished within a three- to five-year period after graduation. Studies of the graduate medical education system reveal that switching specialty is a frequent phenomenon. As individuals learn about their own talents and the opportunities available, they make appropriate adjustments. Thus, although there is a long lag inherent in the system of training, it is comparable to lags in other highly skilled manpower markets.

Market forces have their effects on medical schools as well as students. Rising educational costs coupled with declining amounts of government support have forced many faculty and administrative decision-makers to take greater account of the economic consequences of their actions. These difficulties are evidence of the impact of market forces on the educational establishment. Providing high quality education in these circumstances requires considerable skill.

Since its founding the AMA has been involved in the medical education process. This history includes the initiation in 1906 of a program by the Council on Medical Education to inspect and classify American schools of medicine, and more recent participation with other professional groups in the Liaison Committee on Medical Education. This effort has *concentrated on ensuring that acceptable quality training is provided to medical students in the United States.*

The AMA supports the view that a medical school should determine the number of students that it admits. The determination of whether a new medical school should be established or an existing institution be continued requires the local initiative of a university, a medical society, or a community. This position was formulated in the 1951 "Policy of the American Medical Association Regarding the Production of Physicians," and has been reaffirmed in 1971 and 1978. The current reassessment indicates that the 1951 policy continues to be appropriate.

Principle 3: The number of U. S. medical schools should be determined by the availability and allocation of resources and the ability of schools to meet acceptable educational standards. The number of students admitted to individual schools is and should be determined by the faculty and administration of each medical school.

The rapidly changing economic and technological environment suggests that physicians must be able to maintain their flexibility in order to respond to major changes. As a result, it is important for physicians-in-training to obtain a broad scientific and clinical background to complement their specialty training.

This broad base of medical training will allow physicians to shift the focus of their practices in the future, if the need arises, in order to serve a different patient population or to address the evolving needs of

their existing patient load.

Principle 4: Medical education should be sufficiently broad to enable practicing physicians to adapt their practice patterns to the changing needs of the population and changing medical technology.

All medical students, and particularly those from low-income families, are encountering increasing difficulties in financing their educations. Programs that assisted students in recent years are being redefined, reduced, or eliminated for the 1981-1982 school year. In particular, scholarship aid, subsidized loan funds, most federal programs, and some state programs have been significantly altered. The scale of the void that will be created by these reductions may frustrate the efforts of those who would attempt to replace government monies with funds from other sources.

As the out-of-pocket costs of a medical education rise, students will attempt to cope in a variety of ways. The cost of a medical education and related expenses vary widely by medical school, individual living standard, and personal situation. Thus, the choice of attending a more expensive school in a costly location is essentially a voluntary decision by the student for which he or she must accept responsibility.

In any case, it appears likely that students increasingly will be forced to consider the cost of medical education when they submit their applications. Qualified students from disadvantaged backgrounds are of particular concern. Those students already pursuing a medical career will be forced to commit more of their own resources than expected. The Association realizes the significance of this problem.

Principle 5: The AMA encourages development of a variety of innovative financing mechanisms to assist medical students who are faced with high cost and dwindling sources of financial aid.

The provision of quality medical care is essential to meeting the health care needs of the nation. Since its founding in 1847, the AMA has been a leader in developing and advancing standards for the education of physicians and for the quality of medical care. The AMA has consistently pursued this goal through its efforts in conjunction with other organizations to accredit American medical schools, graduate medical training institutions, and continuing medical education programs; support of state programs to license physicians through formal boards of medical examiners; and endorsement of peer review programs. These efforts provide an important service to the public and the profession by assuring appropriate standards for professional practice.

Consistent with this philosophy, *the AMA has opposed the application of the accreditation, licensure, and other quality assurance procedures for any purposes other than ensuring the quality of care.* Six states now issue licenses by specialty, although few physicians have chosen this option, and none of the states has restricted practice in a specialty to those who have been licensed in that specialty. Several state legislatures have considered, however, using their state licensing process to limit the number and specialty distribution of physicians within their states.

The AMA believes that the public in a democratic society can best be served by an educational system that maximizes the freedom of individuals to choose and develop their career interests and opportunities. This precept applies to both the selection of medicine as a career and the choice of a specialty.

Principle 6: The medical profession has an ongoing responsibility to ensure the quality of care and the maintenance of appropriate standards for medical education at all levels. Quality assurance procedures should be used solely for their stated purposes.

Allied Health Manpower

In keeping with the concern for quality medical care, AMA policy has focused on both the physicians and the allied manpower who are involved in the delivery of medical services. The role of allied health manpower has been recognized and supported by the medical profession for many years.

There are a number of important distinctions to be made among different types of allied health professionals. In this report, the discussion is limited to those categories of health care personnel who *perform patient care functions upon the order of or under the direction and supervision of a physician, but are not licensed as independent health care practitioners*. AMA recognizes that other nonphysician, independent practitioners are licensed by the state to perform specific health care services. For the groups addressed in this report, however, the same principles that guide AMA policy on the size and distribution of the physician population can and should be applied.

Reliance on market forces in this area, as was the case with physician-specific issues, means that potential job satisfaction and income prospects, when compared to educational costs, will lead potential allied health personnel into appropriate career patterns. No agency, public or private, will be able to determine the appropriate number of practitioners for different professions.

There is, once again, a central role for organizations like the AMA in disseminating reliable information on alternative careers. Individuals, particularly young people deciding on a career, need information on which to base their career decisions. In keeping with the recommendations concerning physicians, the AMA believes that it is appropriate to collect and widely disseminate the information that will aid interested individuals contemplating careers in the allied health professions.

Principle 7: The number and distribution of allied health manpower should be determined, insofar as possible, by processes of the markets. The number of training programs should be determined by the market and the ability of each program to meet acceptable educational standards applicable in the United States. The number of students enrolled should be determined by the faculty and administration of the individual training institution. In addition, information about career prospects should be collected and widely disseminated by interested organizations, including the AMA.

The physician has the ultimate legal and ethical responsibility for the medical care of his or her patients. AMA policy recognizes that allied health personnel also have legal and ethical responsibilities to the patient. Moreover, it is the position of the AMA that direct physician supervision is not required for all services performed by allied health personnel. With the increased specialization of modern health care, however, it is advantageous to have one individual with overall responsibility for the medical care of the patient. The physician is well suited by professional preparation to assume this leadership role.

It is important to determine which specific medical procedures or functions can be performed only by physicians and which can be performed by specialized categories of allied health personnel with specific levels of physician supervision. AMA policy encourages continued dialogue between physicians and allied health manpower at state and local levels to determine the extent of responsibility and scope of functions to be assumed by such practitioners which are conducive to the best care of patients.

Reliable mechanisms should exist to ensure that individuals in each profession possess medical skills commensurate with the patient care functions that may be delegated to them. Quality assurance of allied health professions should be met through accreditation of educational programs and voluntary credentialing mechanisms.

Accreditation is a voluntary process and should be conducted by appropriate associations of health care professionals who have the background and knowledge necessary to evaluate educational programs. The AMA should continue to play a significant role in the accreditation of educational programs for allied health professions to ensure appropriate regard for the impact of coming changes in medical practice.

Voluntary certification programs which evaluate the qualifications of individual allied health personnel are another means of providing public assurance of quality health care. Voluntary certification of allied health workers who function under medical supervision is preferable to licensure because it permits greater flexibility in their utilization. There is a little justification for state licensure of allied health personnel who work under the supervision of a licensed physician.

Principle 8: Both physicians and allied health professionals have legal and ethical responsibilities for patient care, even though ultimate responsibility for the individual patient's medical care rests with the physician. To assure quality patient care, the medical profession and allied health professionals should have continuing dialogue on patient care functions that may be delegated to allied health professionals consistent with their education, experience and competency.

Consistent with the prime function of the American Medical Association to represent physicians, strongly endorsed by the House of Delegates at its Annual Meeting in June 1981, the AMA shall continue and extend its essential role in analyses and assessment of health manpower in its relationship to medical and

other services for the restoration and maintenance of health, and to the resolution of issues related to the availability of timely and effective services for the health of the public. The AMA must maintain its preeminent position among the several bodies and institutions addressing and responding to the complex issues of health manpower.

Principle 9: The AMA has realized the dynamic forces of the marketplace; however, it recognizes that market forces can be altered. The AMA acknowledges the authorities and responsibilities of educational institutions and the functions of government. The AMA maintains an essential interest and role in health manpower assessment and planning in whatever setting this may occur. The AMA will work closely with institutions responsible for medical education and allied health education, legislatures, governmental and nongovernmental agencies and organizations, and the constituent state and county medical societies wherever planning and the resolution of problems related to medical and other aspects of health care occur.

Implications

On the basis of these principles, the Association will implement or continue a series of programs designed to promote the well-being of the profession and the public. These programs will monitor trends, analyze and disseminate relevant information, and represent the profession's positions in policymaking forums.

Monitor Trends

The AMA has collected and disseminated information about physicians for over 70 years. Today the Association is considered to be the most comprehensive source of information on physicians in the United States. The Record of Physician's Professional Activities (PPA) has collected information on physicians' professional activities, their area of specialization and their current employment on an "hours worked per week" basis. The 1981 PPA Census which is currently under way will continue to maintain a current and comprehensive basis for monitoring trends in the physician population.

Since 1900, the AMA has collected and published an extensive collection of information on the detailed operation of the medical education system. The annual edition of *JAMA* which contains a description and analysis of the undergraduate, graduate, and continuing education system is the authoritative source on physician education. In addition, the AMA publishes the annual *Directory of Residency Training Programs* which details the number and types of graduate training programs.

For the past 15 years the AMA has been collecting information on the practice patterns of physicians. The basic monitoring activity will soon be enhanced by the implementation of a Socioeconomic Monitoring

System (SMS). SMS will provide information on physicians' fees, utilization rates, number of hours worked, number of patients seen, and other practice patterns. This system, based on telephone interviews of physicians, is designed to be flexible enough to collect data throughout the year and produce timely reports on current issues.

For other health services workers, the Association will explore cooperative ventures for the collection of information. This is in addition to the *Allied Health Education Directory* which the AMA compiles and publishes each year. This volume provides the details of the education and training programs of 26 allied health occupations.

Analyze and Disseminate Information

Analysis and distribution of information has been an important source of the Association's ability to influence events. AMA publications on the distribution of physicians and the socioeconomics of health care give the Association the opportunity to provide important services to members and the public.

Placement services that help match physicians with suitable practice opportunities are of great value to the profession, particularly to those physicians in transition. In addition, many physicians can benefit from advice on improving the business side of medical practice. Starting a new practice, improving an existing one, or closing a practice all involve unique problems for an individual professional. The AMA and other interested organizations have much to offer in the collection and dissemination of these different types of information.

A program providing current information to college career counseling officers about the various health professions will be implemented. This program would ultimately provide young people with the information they need to make intelligent choices about their career alternatives.

Exploration of possible physician retraining programs is also indicated. The rapidly changing environment creates the need for intensive training of established physicians wishing to change their professional focus. The AMA, perhaps with other interested organizations, will explore the feasibility of meeting this need.

Represent the Profession

An important function for AMA activities on health manpower is to represent the physicians' view that a market-oriented approach to health manpower is, in general, the correct basis for policy. This message must be forcefully delivered to those who would advocate the arbitrary determination of the number of physicians, nationally or locally; the number or size of U.S. medical schools; and the number of allied health manpower. The AMA can play an important role in facilitating the workings of the market. The principles in this report outline the Association's response to the general policy issues that arise, and offer guidance for responses to particular proposals.

Coronary Artery Bypass Surgery: Scientific and Clinical Aspects

A Consensus Development Conference, held at the National Institutes of Health on Dec. 3-5, 1980, considered the status of coronary artery bypass surgery in relation to five specific questions:

What is overall management of patients with coronary artery disease—that is, in what context should coronary artery surgery be considered?

Coronary heart disease may be recognized by the physician as the clinical syndromes of angina pectoris, acute myocardial infarction, sudden cardiac arrest or ischemic cardiomyopathy. It may also be recognized in an asymptomatic form by detection of electrocardiographic evidence of prior myocardial infarction not recognized during the acute episode or by characteristic abnormalities of the electrocardiogram during exercise testing of apparently healthy persons. Once suspected by the physician, the diagnosis may be confirmed with various levels of certainty by utilization of one or more special diagnostic tests. The tests most commonly used include the electrocardiogram recorded during and after monitored graded exercise, in some institutions radionuclide studies of myocardial perfusion and ventricular function at rest and in response to exercise, and coronary arteriography with left ventricular angiography. In addition to confirming the diagnosis, such studies may provide information as to the pathological anatomy of the coronary arteries, the functional condition of the left ventricle and the overall response of the circulation to stress. These data may be combined with those obtained from the medical history and physical examination and with detailed knowledge of the natural history of the disease derived from many long-term follow-up studies of patients having such testing to form definable subsets of persons with widely different prognoses. Since a fundamental aspect of advanced coronary heart disease is a greatly increased probability of sudden death or myocardial infarction, such prognostic information strongly influences the decision on whether to add coronary artery bypass surgery to the overall lifelong medical management recommended. If the combined data indicate that the patient is at high risk of sudden

death or infarction—e.g., the patient with severe stenosis of the main trunk of the left coronary artery or severe and proximal stenosis of multiple major coronary branches—especially serious consideration is given for surgery. On the other hand, if the studies indicate that there is no critical stenosis of any major coronary branch, then clearly surgery is not indicated and medical treatment is advised.

But a very large percentage of patients fit between these extreme examples. In these patients, recommendations for medical or surgical therapy are based upon two fundamental questions. One question, often most anxiety provoking to the patient, relates to the perception of the physician and the patient as to which course provides the greatest protection from disabling myocardial infarction or death. The second question relates to which course will allow the patient to obtain a satisfactory quality of life according to his own standards. The answers to these questions remain highly judgmental. The answer to the first is heavily based upon the physician's interpretation of a large volume of sometimes contradictory data of extraordinary complexity. The answer to the second is heavily based upon the individual patient's response to medical therapy and to his or her priorities.

It is common practice for the physician and patient, when faced with this problem, to initiate comprehensive medical therapy with subsequent periodic reevaluation of the patient's response to his treatment. It is critically important to recognize that appropriate, comprehensive medical care of the patient with coronary heart disease requires an intensive effort on the part of the physician, involving consideration of almost every aspect of the patient's life. It requires careful education of the patient and spouse on the nature of the disease and its management so as to allow adequate self-care on a continuing basis and to allow the patient to participate knowledgeably in major decisions affecting his or her life. It requires optimal control of risk factors for atherosclerosis and modification of lifestyle appropriate to the constraints imposed by the illness. This may affect both work and leisure activities. It may require long-term administration of such potent medications as nitroglycerin, beta-adrenergic blocking drugs, long-acting nitrates, antiarrhythmic agents and digitalis, among others. Effective and safe utilization of these therapeutic agents requires careful titration of dosage against both subjective and objective indices. If, after such careful and intensive medical treatment, the patient believes that the quality of life is so adversely affected that other alternatives must be sought, then surgical ther-

This conference was sponsored by the National Heart, Lung, and Blood Institute in conjunction with the National Center for Health Care Technology and with the assistance of the Office for Medical Applications of Research, Office of the Director, NIH.

Copies of this Consensus Statement and names of panel members may be obtained from the Office for Medical Applications of Research, National Institutes of Health, Bldg. 1, Room 216, Bethesda, MD 20205.

apy may be advised in patients suitable for this operation. It must also be recognized that in many cases dissatisfaction with the altered lifestyle imposed by the illness is the result of inadequate attention to the details of management; failure of the physician to educate the patient concerning appropriate use of the indicated medications may be a particularly important cause of this outcome.

In patients with chronic stable angina and good ventricular performance, aorto-coronary revascularization of the heart, whether with autologous vein or artery, has had a progressive decline in operative mortality to levels as low as 1% to 2% at major surgical centers. A corresponding decrease in perioperative myocardial infarction has been achieved. These results are assumed to relate to better management of anesthesia, more complete myocardial revascularization and improved methods for protecting the heart during the period of coronary grafting. There seems to be no doubt that coronary bypass surgery can improve myocardial perfusion. Patency of aorto-coronary saphenous vein grafts has been in the range of 80% to 85% two years after operation. The procedure has been widely accepted as treatment in patients with unacceptable symptoms on medical therapy and in certain other subsets of patients with coronary artery disease.

What constitutes a reasonable diagnostic workup before recommending medical or surgical therapy?

A reasonable diagnostic workup of a patient with angina pectoris depends upon the clinical problem at issue. Instability and severity of angina, effect of disease on the quality of life, cardiac function and, to a certain degree, age play a role in determining the workup of each patient. The workup should be done as efficiently as possible to provide definitive information upon which clinical decisions can be made. Unnecessary and redundant procedures should be avoided.

In some patients the clinical picture indicates the need for anatomic definition of the coronary anatomy to determine operability. There is consensus that patients with stable angina whose quality of life is significantly impaired by their symptoms should undergo coronary arteriography. Further, in patients with unstable angina, coronary arteriography should be performed during the initial phase of hospitalization; if maximal medical therapy does not relieve symptoms, this procedure should be done urgently. There is consensus that coronary artery bypass graft surgery is indicated in patients with unacceptable symptoms on appropriate medical treatment or with recurrent unstable angina, but the decision to operate must also depend on results of invasive studies.

In patients with typical angina not sufficiently severe to dictate surgery for relief of symptoms, noninvasive cardiac testing may be carried out initially in the attempt to identify those at high risk for major cardiac events. However, there is lack of consensus on the value of noninvasive testing in the workup of such patients. Some physicians prefer coronary arteriography as the initial diagnostic procedure, particularly in the young patient. Others recommend exercise electrocardiography in an attempt to identify patients with

significant left main or triple-vessel disease. Such patients will often show early and/or excessive ST segment deviations, prolonged ST segment depression into the recovery period, or decrease in blood pressure during the test. In this category of patients, coronary arteriography should be carried out and, if high-risk pathology is found, coronary artery bypass surgery considered. The use of radionuclide studies to identify high-risk patients with left main and/or triple-vessel coronary disease needs further evaluation.

There is lack of consensus on the approach to evaluation of patients with questionable or atypical angina. In such patients exercise electrocardiography may be helpful in the identification of those with significant coronary disease; such identification may be enhanced by radionuclide studies in conjunction with exercise testing, particularly in patients with resting electrocardiographic abnormalities which impair the interpretation of the exercise electrocardiogram. The presence of coronary artery disease may be indicated by transient myocardial perfusion defects, wall motion abnormalities or an abnormal response of the left ventricular ejection fraction to exercise. Further research is needed to determine the role of noninvasive testing in patients with, or those suspected of having, coronary artery disease.

Survivors of an acute episode of myocardial infarction are at high risk of sudden death during the first year after the infarction. Recent studies have demonstrated one-year mortality ranging from 10% to 15% of all survivors. Several investigators have reported that these patients can be divided into high-risk and low-risk subgroups on the basis of clinical information and such noninvasive testing as exercise electrocardiography, radionuclide studies of ventricular function, and ambulatory 24-hour electrocardiographic recording. It is believed that high-risk patients should undergo coronary arteriography and left ventricular angiography followed by surgical intervention if the coronary anatomy and left ventricular function are appropriate. It should be recognized, however, that the course of these patients undergoing surgery may differ from that of patients with stable or unstable angina and apparently similar coronary anatomy and ventricular function, in that they appear to exhibit a greater tendency for major ventricular arrhythmia. It is also recognized that there is as yet insufficient data to determine whether surgical intervention will reduce the mortality of this special subset of patients with coronary heart disease. Because of the relatively large number of patients included in this high-risk post-myocardial infarction subset, and the present uncertainty as to the proper course of management, an urgent need exists for further investigation of this problem.

The problem of the patient with coronary disease presenting with congestive heart failure needs special consideration. It is important to determine whether a lesion amenable to surgery is contributing significantly to the heart failure, e.g., a ventricular aneurysm, severe mitral incompetence and/or a postmyocardial infarction ventricular septal defect. Two-dimensional echocardiography or radionuclide ventriculography may be noninvasive techniques of help in the evaluation of such patients.

What is known about long-term survival with coronary artery bypass surgery in specific patient groups?

The impact of coronary artery bypass graft surgery on survival of patients with coronary artery disease has been the focus of extensive debate since its introduction. In considering data on survival, the severity of left ventricular dysfunction has been determined to have an adverse effect on survival, and comparisons between surgical and medical therapy must take this into account as well as the anatomic location and extent of disease defined by coronary arteriography.

It is well recognized that the interpretation of the results of surgical series by comparison with historical controls is difficult. It is especially hazardous in the assessment of coronary artery surgery because of marked changes between early and recent results, both for surgically treated and for medically treated patients. Several recently published series with long-term follow-up of patients undergoing coronary artery bypass surgery have documented an impressively low operative mortality with remarkable long-term survival. At the same time, other studies have noted a marked improvement in recent years in the survival of medically treated patients. Accordingly, it seems unlikely that convincing evidence of the benefits of surgery in appropriately defined subgroups can be effectively assessed from other than adequately controlled studies.

There is consensus that coronary artery bypass surgery in patients with angina pectoris and greater than 50% narrowing of the luminal diameter of the left main coronary artery results in improved survival when compared with results on medically treated patients regardless of left ventricular function or degree of angina pectoris. (Survival rates with medical and surgical therapy were 60% and 89% respectively at four years in the V.A. trial, and 67% and 89% at five years in the European trial. Left main coronary artery stenosis of this severity is reported in approximately 10% of patients undergoing coronary arteriography.*)

There are only a few prospective randomized trials and observational studies with concurrent medically treated controls to assess the impact of surgery on survival. Furthermore, the application of such results to the overall population with symptomatic coronary artery disease, treated in a variety of centers, must be done with caution. This compounds the problem of judging the effects of coronary artery bypass surgery on survival in patients with three-vessel disease for whom conflicting data exist. (Three-vessel coronary artery disease of surgical significance is reported in 30% to 40% of angiographic studies.*) The V.A. Cooperative Randomized Trial was reviewed. The initial report failed to demonstrate improved survival with surgery in patients with three-vessel disease, the majority of whom had moderate impairment of left ventricular function. However, if one accepts the analysis of the V.A. data for the ten hospitals (which include 87% of the patients) in which the average operative mortality was 3.4% and eliminates the three

outliers in which the average operative mortality was 23%, a significantly improved survival with surgery is observed. There is evidence from observational studies which suggests improved survival in patients with three-vessel disease and moderate impairment of global left ventricular function, i.e., left ventricular ejection fraction in the range of 25% to 50%.

Data were reviewed that suggested improved survival after coronary artery bypass grafting in patients with three-vessel disease and good left ventricular function defined as left ventricular ejection fraction greater than 50%. The European Collaborative Randomized Trial demonstrates improved survival for surgically treated patients in this subset. Though the differences observed in the European trial are impressive (survival rate at 60 months was 82% for the medical group and 94% for the surgical group), there is consensus that confirmation of these findings by additional studies is needed before a firm conclusion can be reached on the question of improved survival in patients with three-vessel disease and good left ventricular function as defined. Other smaller randomized trials and observational studies have yielded conflicting results in this subset.

The two large randomized studies examined do not provide evidence for improved survival with surgery of patients with two-vessel disease regardless of the status of the left ventricle, while some observational studies have suggested improvement in survival with surgery of patients with two-vessel disease and moderate impairment of left ventricular function. There is no evidence currently available to support improved survival after surgery in patients with single-vessel disease regardless of left ventricular functional status.

We do not find data adequate to support the conclusion of improved survival with surgery in patients with severe degrees of left ventricular functional impairment, i.e., left ventricular ejection fraction less than 20%.

Review of the National Heart, Lung, and Blood Institute Multicenter Randomized Unstable Angina Pectoris Trial, which excluded patients with left main coronary artery disease or persistent unstable angina, has failed to show improved survival of those treated by urgent surgery compared to those treated exclusively by medical management unless surgery was dictated by chronic symptomatology. The extent to which results in this highly selected group of patients can be extrapolated to other subsets of unstable angina patients is not established.

It is important to reemphasize that surgery may still be appropriate in patient subsets where evidence of improved survival with surgery is lacking if symptoms of myocardial ischemia are sufficiently severe or if large areas of myocardium are in jeopardy. Further attempts should be encouraged at identifying other variables, currently unmeasured, which may affect survival and thus provide methods for more critical testing of therapeutic effectiveness.

What is known about the long-term quality of life following coronary artery bypass surgery?

There are few objective criteria by which quality of life can be assessed following coronary artery bypass surgery. The symptom of angina pectoris is reported

*Estimates of prevalence of lesions found on coronary angiography have a significant dependence on the criteria for angiography; thus considerable variability may exist among individual institutions.

to be relieved in 80% to 90% of patients undergoing operation for chronic stable angina. Bypass surgery has reduced the subsequent number of cardiac-related events, amount of medication required and frequency of hospitalizations. The majority of postoperative patients have been able to increase their exercise capacity and their New York Heart Association functional class. This has been documented by improvements in functional exercise testing, angina threshold, left ventricular wall motion, left ventricular ejection fraction during exercise, indices of myocardial oxygen consumption during exercise and greater lactate extraction across the myocardium.

Improvements in symptoms and functional capacity associated with coronary bypass surgery theoretically should result in more individuals returning to gainful employment. The consensus is that this expectation has not been accomplished. It is recognized that physicians do not make consistent recommendations to patients regarding exercise potential and employability after successful coronary bypass surgery. Factors extraneous to the patient-physician relationship such as preoperative work status, availability of nonwork income, perception of health, age, level of education, and employer attitudes all appear to influence the postoperative employment status. Whether or not the patient returns to work after coronary bypass surgery depends on too many nonmedical factors to allow any conclusions regarding efficacy of therapy based on this parameter.

It is reported that angina will recur or progress after bypass surgery in about 5% of patients per year. In approximately two thirds of these patients, symptoms are related to closure of the vein graft or progression of disease in the native circulation. This may be related to persistent elevation of blood lipids or poor control of other risk factors. The entire question of mechanisms involved in progression of atherosclerosis in the coronary circulation and in grafts is important and requires further investigation.

Similar results regarding quality of life have been observed in patients undergoing coronary bypass surgery for unstable angina, but the reported follow-up data are of shorter duration than those cited, which are based predominantly upon patients with stable angina.

What is the range of success rates for the procedure in various settings, and what factors may be important in influencing this outcome?

The institutional setting in which bypass graft surgery is performed may importantly influence the rate of success of the operation in various clinical subgroups. Excellence can be achieved in a variety of hospital settings provided appropriate medical and technical support is available to complement an experienced and skilled surgical team. This would include expertly performed angiography in suitably equipped laboratories, the availability of other subspecialty resources and appropriate laboratory and blood banking facilities.

Successful intraoperative management, reflected in low rates of mortality, perioperative infarction and other postoperative complications, and short hospital convalescence will depend not only upon surgical skill

and judgment, but also upon the availability of competent anesthesiologists, efficient extracorporeal support, optimal myocardial preservation techniques and minimal duration of myocardial ischemia consistent with optimal revascularization.

Postoperative management requires a suitable intensive care facility, dedicated personnel and the availability of circulatory support systems.

With the experience that has been accumulated to date, the following expectations for hospital mortality and perioperative infarction are achievable:

- In patients with chronic stable angina pectoris and normal or moderately impaired left ventricular function, a hospital mortality rate of 4% is generally attainable, and a rate of less than 1% is possible. The incidence of electrocardiographically documented perioperative infarction might approximate 5%.

- In the syndrome of unstable angina pectoris, early results will depend upon the institution's approach to management. A somewhat higher incidence of morbidity and mortality may result from earlier operative intervention compared to lesser risks after a longer period of stabilization and exclusion of patients with evolving infarctions. With initial stabilization and nonemergency operation, hospital mortality and perioperative infarction rates should approach those for patients with chronic stable angina pectoris. Even with early intervention, a hospital mortality of 6% is generally attainable, and perioperative infarction might approximate 10%.

- The existence of left main coronary artery involvement has been associated with high operative risks in the past. Currently, and except under emergency conditions, individuals with this lesion can be operated upon with morbidity and mortality rates only slightly higher than for those with chronic stable angina with other coronary anatomy.

- Bypass grafting in patients with severe left ventricular dysfunction has been associated with high operative morbidity and mortality. Recent improvements in perioperative management have lessened the risks. In patients with very severe myocardial dysfunction—i.e., ejection fractions of less than 25%—a hospital mortality rate no greater than 15% to 20% is generally achievable.

- At this time there is insufficient information to identify the role of bypass surgery in patients with acute myocardial infarction, intractable ventricular arrhythmias or asymptomatic patients with jeopardized myocardium.

For all categories of patients, average one-year graft patency of 85% to 90% should be achievable. The roles of anticoagulant and antiplatelet therapy, as well as other interventions which may affect late graft patency and retard the arteriosclerotic process, are not known at this time and require further study.

Conclusion

There is consensus of the panel that coronary artery bypass surgery represents a major advance in the treatment of patients with coronary artery disease. Evidence has been presented to support the conclusion that improvement in the quality of life, decreased myocardial ischemia, and increased survival in selected subsets of patients have been demonstrated.



CAT Scan of the Month

STEPHEN L. GAMMILL, M.D.; ALLEN TONKIN, M.D.;
MAX PAINTER, M.D.; and EUGENE JABBOUR, M.D.

A 71-year-old white man sought medical care for a large lump in his right buttock and upper leg. The lump had appeared six months previously and had steadily enlarged, and he experienced some pain in his right leg upon walking. A large mass was felt in his right buttock that was movable and pliable. The initial diagnostic impression was liposarcoma, since the mass had grown rather rapidly. A CAT scan was obtained for thoroughly outlining the boundaries of the mass and aiding in diagnosis and preoperative planning. Please examine Figures 1 and 2.

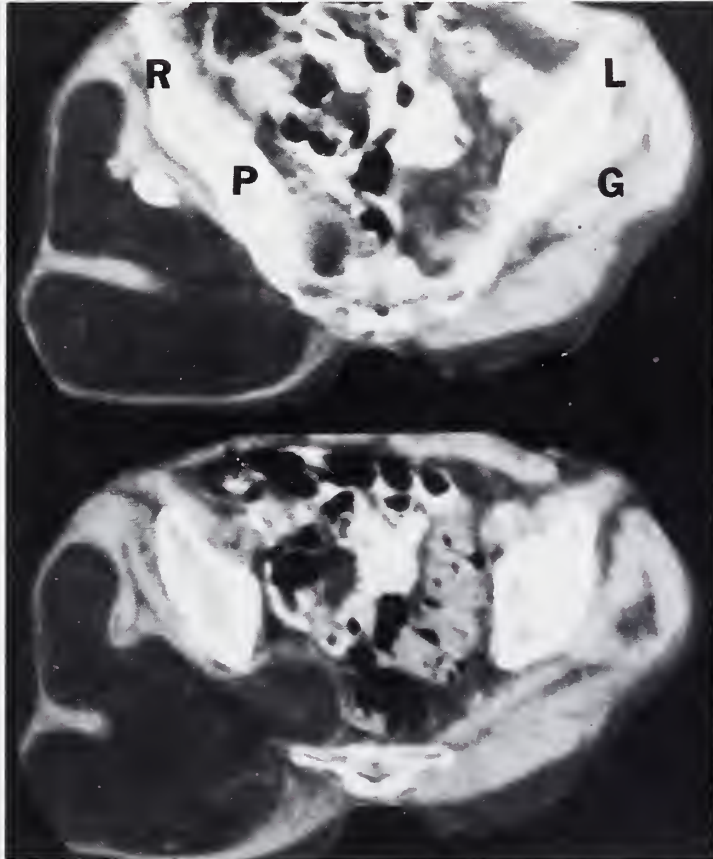


Figure 1. Two cuts through the gluteal region (R=Right, P=Pelvis, L=Left, G=Gluteal Muscles). Note the irregularly shaped, radiolucent mass in the right gluteal muscles. This degree of radiolucency is strongly suggestive of fatty tissue.

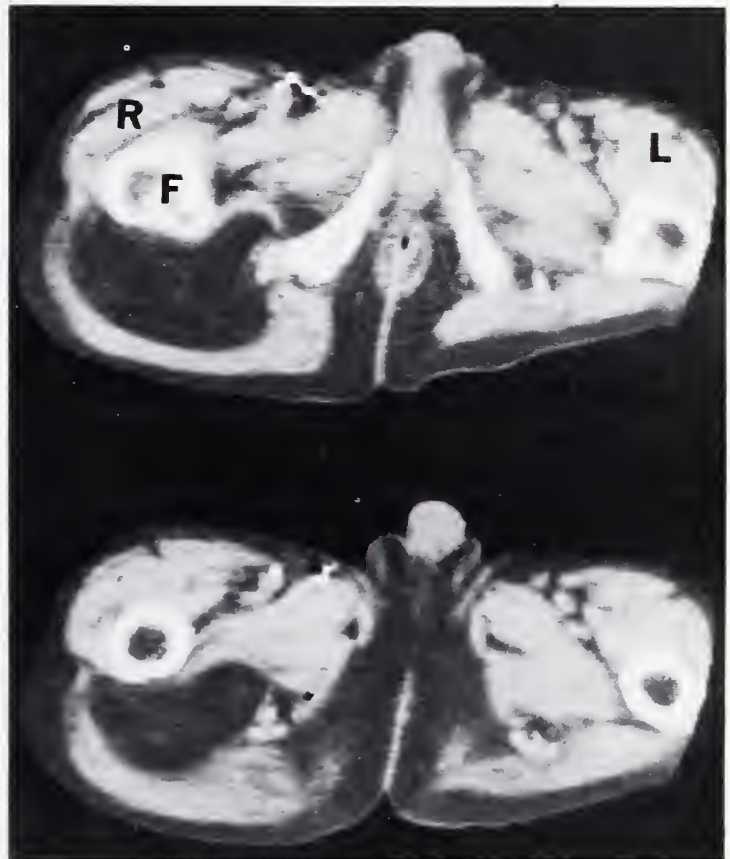


Figure 2. Two cuts caudal to the ones in Figure 1 (F=Femur, R=Right, L=Left). Note that the radiolucent mass extends caudally into the muscles of the thigh but that the dissection planes are distinct throughout and that the bones are neither destroyed nor invaded.

Discussion

Note the immediately apparent asymmetry of the pelvis and upper femurs owing to the radiolucent mass extending from the gluteal muscles caudally into the muscles of the thigh. Note that the mass is well circumscribed, the dissection planes appear distinct, and no bony destruction is evident. It therefore seemed unlikely that despite the rapidity of its growth the mass was a sarcoma. We thought it was a lipoma.

The mass was biopsied and permanent histologic sections examined. The diagnosis was lipo-

ma without sarcomatous degeneration. Under general anesthesia, the mass was excised from the buttock and thigh. The dissection planes were indeed distinct and the mass was easy to remove in toto. Further histologic sections failed to uncover any sarcomatous changes.

The CAT scan in this case aided in the establishment of the diagnosis and the planning of resection. Had the dissection planes not been distinct, or had bony destruction or invasion been detected, other therapeutic modalities might have been necessary.

FINAL DIAGNOSIS: Lipoma of the right gluteus and thigh.

From the Departments of Radiology and Surgery, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146.

W. BARTON CAMPBELL, M.D.

A 71-year-old woman was admitted to St. Thomas Hospital for evaluation of intermittent "dizzy" episodes. She had a long-standing history of hypertension and had undergone an abdominal aortic aneurysm resection with right renal artery bypass, as well as a left carotid enarterectomy. One week prior to admission she had an episode of transient weakness involving the right arm and right leg. Medications at the time of admission included propranolol (Inderal) 160 mg orally, twice a day, and nifedipine (Procardia) 20 mg orally, three times a day, but she was not taking digitalis. The serum potassium was 4.3 mEq/liter. The admission electrocardiogram is shown (Fig. 1).

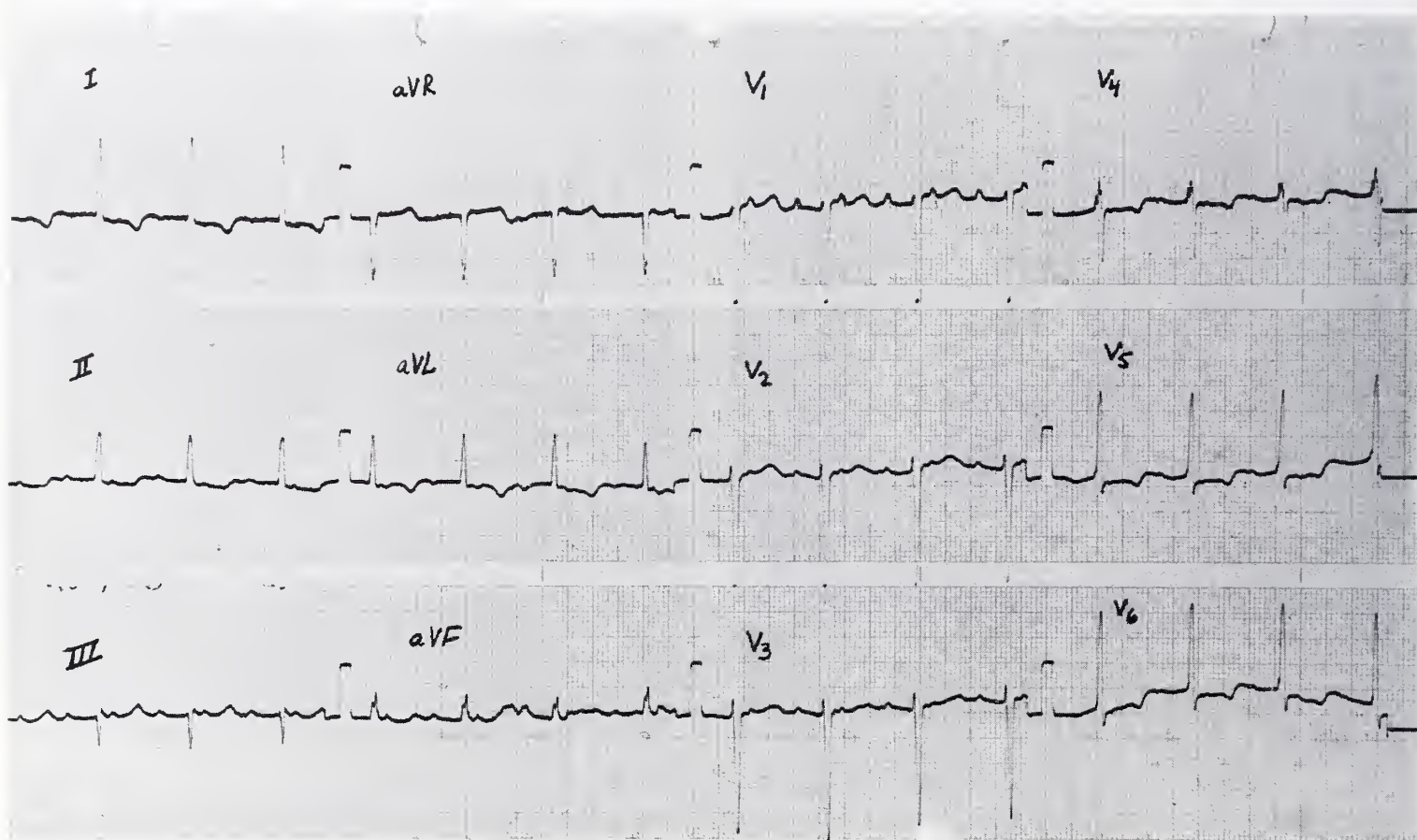


Figure 1

Discussion

Admission electrocardiogram shows the ventricular rate to be 82/min with regular rhythm. The atrial rate is 164/min. There are two P waves for each QRS complex. The tracing is technically inadequate as the S wave in leads V₁ and V₂ is

off the paper. There is nonspecific T inversion in leads I, II, aVL, and V₄ through V₆. The QT interval is 0.40 seconds.

Because of the supraventricular tachycardia with 2 to 1 block the patient was placed on quinidine in a dose of 300 mg orally every six hours. Two days later the quinidine level (drawn six hours after the preceding dose) was 2.3 µg/ml (therapeutic range 2.3 to 5 µg/ml). The serum

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

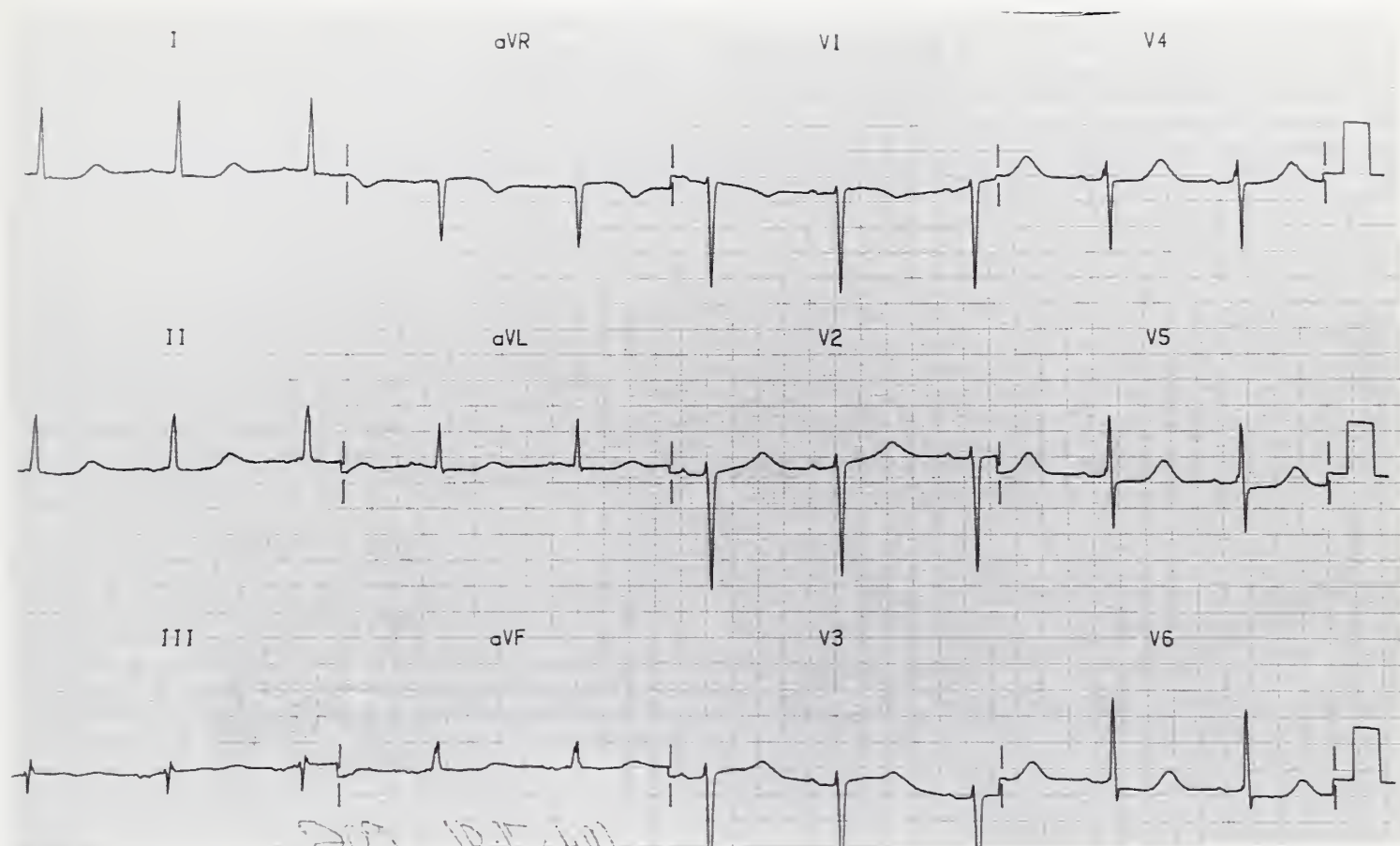


Figure 2

potassium was 4.7 mEq/liter. An electrocardiogram was obtained (Fig. 2).

This tracing shows sinus rhythm at a rate of 60/min, with a PR interval of 0.20 seconds. The striking change is prolongation of the QT interval which is now 0.64 seconds. The T vector is now more leftward resulting in upright T waves in I, aVL, and V₂ through V₆.


The clinical significance of QT prolongation due to quinidine has been controversial. It was previously felt that in the absence of QRS widening QT prolongation did not imply a significant risk of ventricular tachycardia.¹⁻³ More recent data suggest that QT intervals prolonged in excess of 0.60 seconds may be associated with atypical ventricular tachycardia even when QRS duration is normal.⁴

Although the corrected QT interval (QT_c) is often used to "compensate" for heart rate, several studies suggest that this QT "correction" is less clinically applicable than the absolute value of the QT interval.⁴⁻⁶

It should be noted that QT prolongation in this patient was associated with a quinidine level in the "therapeutic" range. Although QT pro-

longation is dose related, it has long been recognized that certain patients may have striking prolongation of the QT interval with "therapeutic" quinidine doses. It is felt that the temporal dispersion of repolarization associated with a long QT interval is responsible for the atypical ventricular tachycardia and the increased incidence of sudden death in this group of patients.

This patient was on quinidine for ten days with QT prolongation and developed no further arrhythmias. In view of concern about possible ventricular tachycardia her quinidine dosage has been decreased.

CONCLUSION: QT prolongation induced by quinidine in therapeutic doses. 

REFERENCES

1. Friedberg CK: *Diseases of the Heart*, ed 3. Philadelphia, WB Saunders, 1966, p 554.
2. Schamroth L: *An Introduction to Electrocardiography*, ed 5. Oxford, Blackwell, 1976, p 84.
3. Marriott HJL: *Practical Electrocardiography*, ed 6. Baltimore, Williams & Wilkins, 1973, p 303.
4. Keren A, Tzivoni D, Gavish D, et al: Etiology, warning signs and therapy of torsade de pointes. *Circulation* 64:1167-1175, 1981.
5. Bazett HC: Analysis of the time relations of electrocardiograms. *Heart* 7: 353, 1920.
6. Manion CV, Whitsett TL, Wilson MF: Applicability of correcting the Q-T interval for heart rate. *Am Heart J* 99:678, 1980.

A New Challenge for Venereal Disease Control

JOHN SHOMO

Six years have elapsed since the first case of infection due to penicillinase-producing *Neisseria gonorrhoeae* (PPNG) was identified in the United States.¹ Strains of *N. gonorrhoeae* with partial resistance to penicillin have been recognized for years, but the emergence of a strain with complete resistance created a serious threat to public health and presented a new challenge to venereal disease control programs and the medical community. Initially, cases were imported from the Philippines, Thailand, and the Republic of Korea. By intensifying surveillance and applying effective epidemiology, domestic transmission was controlled successfully in the United States from 1976 through 1979. While most of the 838 cases seen during this period were imported, domestic transmission increased at an alarming rate in 1980 and 1981 when 1,116 and 2,728 cases respectively were identified.²

In 1977, Tennessee's gonorrhea case rate of 818.3 per 100,000 ranked fifth among the 50 states, and was 76% higher than the national average.³ Follow-up information for several hundred contacts was exchanged annually with over 40 states and seven foreign countries. These conditions were conducive to the importation of PPNG and domestic transmission within the state. Our laboratory services were expanded to test the positive gonorrhea cultures from high-risk patients for β -lactamase production, the enzyme responsible for penicillin resistance. High-risk patients were defined as persons (1) knowingly exposed to PPNG, (2) with a history of exposure in the Far East or exposure to a person who recently returned from the Far East, (3)

whose test-of-cure was positive, and (4) with apparent treatment failure.

Tennessee's first case of PPNG was identified in February 1978. Six cases occurred during 1980, but Pandora's box ruptured in 1981 and an additional 38 cases emerged. Only nine states recorded a greater number during that year. As the number of cases increased, surveillance and control activities were expanded, and all positive gonococcal cultures were tested for β -lactamase production.⁴ All gonorrhea patients treated in public health clinics were encouraged to return for a test-of-cure within three to seven days following treatment. A culture for gonococcus was recommended for all venereal disease patients, including symptomatic male patients with positive smears. (Several cases of PPNG were initially missed because male patients were diagnosed on the basis of a positive smear only, thereby precluding a test for PPNG.) Rapid and thorough contact follow-up was conducted for an expanded number of gonorrhea patients. Patients with two or more gonococcal infections within a 12-month period were routinely referred for a follow-up culture four weeks after treatment. (Approximately 17% of these follow-up cultures were positive.) All contacts to PPNG infection were expeditiously referred for examination and treatment with spectinomycin.

Spectinomycin, given in a 2-gm intramuscular dose, is the recommended treatment for PPNG infections.⁵ Since resistance of gonococci to spectinomycin has been documented in the past, and indiscriminate use of this drug ultimately could result in spectinomycin-resistant organisms, it is recommended that physicians restrict their use of spectinomycin to two types of patients: those infected with, or with recent contact to, PPNG

From the Tennessee Department of Public Health, Division of Venereal Disease Control, Nashville.

organisms, and those with a positive follow-up culture after initial treatment with recommended doses of penicillin, ampicillin, or tetracycline. Patients with PPNG who do not respond to spectinomycin should be treated with cefoxitin, 2 gm intramuscularly, given with probenecid, 1 gm orally. Since spectinomycin and cefoxitin may be ineffective for pharyngeal gonococcal infection, sulfamethoxazole/trimethoprim, nine tablets (400 mg sulfamethoxazole/80 mg trimethoprim per tablet), in a single dose daily for five days should be given for PPNG infection at this site.⁵

The clinical spectrum of PPNG appears to be similar to that of other gonococcal infections in terms of severity of symptoms, percent of asymptomatic infection, and complications. There is

also concern that the plasmids responsible for the production of β -lactamase might be transmitted to other bacterial pathogens, such as the meningococcus.

The chain of infection represents a cross-section of some unique situations that have contributed to the domestic spread of PPNG in Tennessee (Fig. 1). It also demonstrates a need to reassess and alter some procedures which have been used traditionally to diagnose, treat, and monitor gonorrhea patients.

A routine gonorrhea culture taken on patient "A" during a family planning clinic was found to be positive for PPNG. The epidemiologic process subsequently resulted in a chain identifying four generations of infection involving 13 per-

PENICILLINASE PRODUCING NEISSERIA GONORRHOEAE (PPNG)
TENNESSEE OUTBREAK
1981

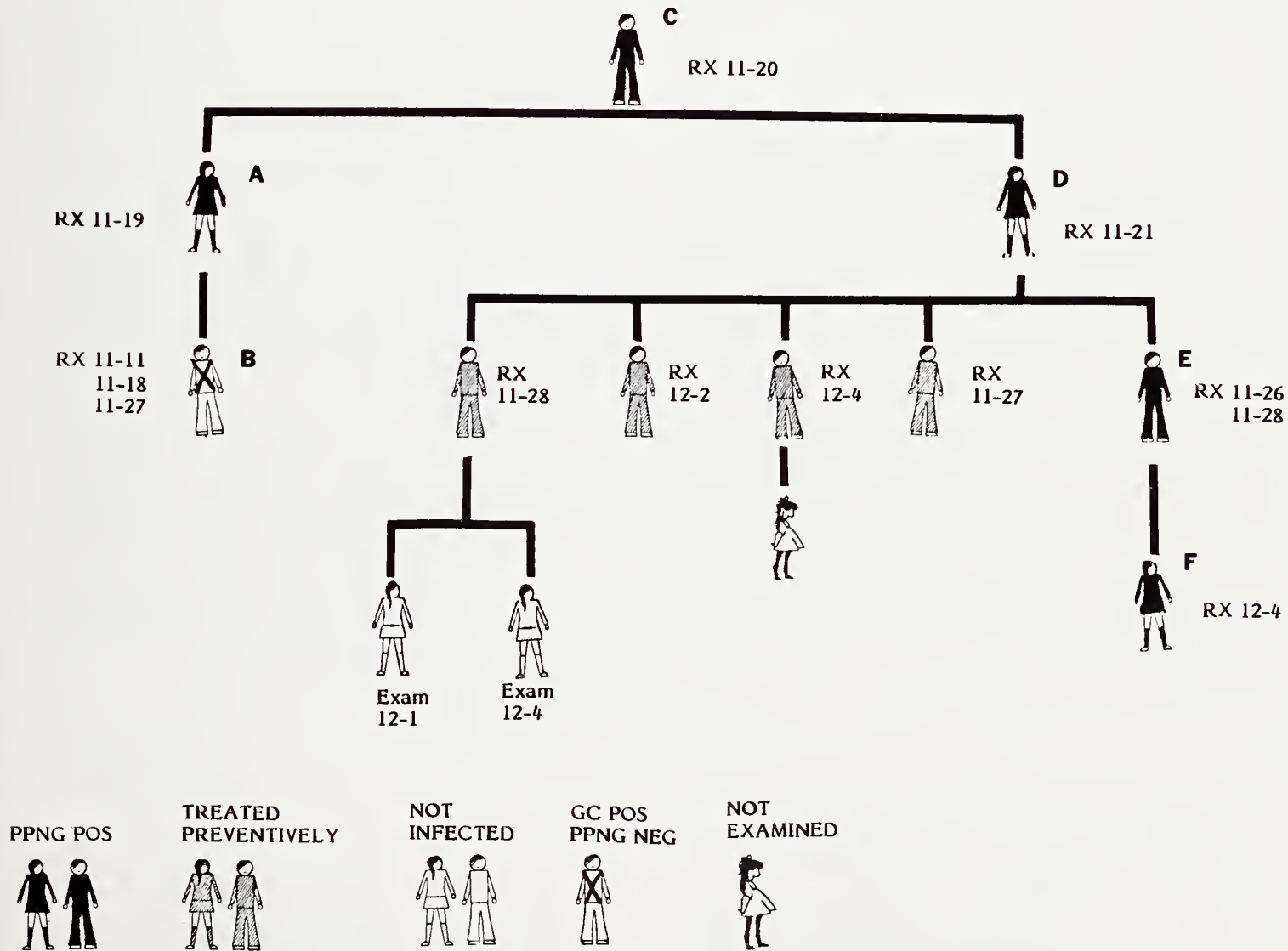


Figure 1

sons, five cases of PPNG infection, and one of regular gonorrhea. Other significant facts identified with this chain are:

- patient "C" was asymptomatic, but had a recent history of treatment in Korea. His culture was positive for PPNG.
- patient "B" had recently been seen with symptoms by a private physician, who prescribed therapy during two separate visits although no diagnostic tests were performed. This patient was symptomatic when reexamined by the health department. His culture was positive for regular gonorrhea but negative for PPNG.
- patient "E" exhibited symptoms and went to a private physician, who treated him with ampicillin. A culture proved positive for regular gonorrhea, but negative for PPNG. This patient was still symptomatic when reexamined by the health department. His culture at this time was positive for PPNG.
- the need to validate examination and treatment of sex partners. Without contact follow-up, four patients with PPNG would not have received the recommended treatment schedule.
- the value of screening all positive gonorrhea cultures for β -lactamase production.
- the value of obtaining a culture from patients exposed to gonorrhea or suspected of having the disease.
- the value of a test-of-cure culture within three to seven days after treatment.
- the speed of disease transmission and the need for expedient referral of sex partners to examination and treatment.

The majority of Tennessee's PPNG cases in 1981 resulted from domestic transmission and emphasized the need to further strengthen the proven surveillance and control activities. If PPNG is to be controlled in Tennessee, the public and private medical sectors must fully utilize a cooperative partnership to manage gonorrhea patients effectively.

REFERENCES

1. Penicillinase-producing *Neisseria gonorrhoeae*. *Morbidity Mortality Weekly Rep* 25:261, 1976.

2. Penicillinase-producing *Neisseria gonorrhoeae* (PPNG). Number of cases reported by month, cumulative May 1976-Dec 1981. CDC, CPS, VDCD, SSS, Atlanta (unpublished communication).

3. *Sexually Transmitted Disease (STD) Statistical Letter*. USDHEW, PHS, CDC, no. 127, table 12, May 1978.

4. Jorgensen JH, Lee JC, Alexander GA: Rapid penicillinase paper strip test for detection of beta-lactamase-producing *Haemophilus influenzae* and *Neisseria gonorrhoeae*. *Antimicrob Agents Chemother* 11:1087, 1977.

5. Penicillinase-producing *Neisseria gonorrhoeae*—New Mexico, California. *Morbidity Mortality Weekly Rep* 29:382, 1980.

Cyclapen®-W (cyclacillin)

Indications
Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT
Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*), *H. influenzae*, and Group A beta-hemolytic streptococci
Acute exacerbation of chronic bronchitis caused by *H. influenzae*
*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg t.i.d. body weight > 20 kg (44 lbs) 250 mg t.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day t.i.d.†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.
†depending on severity
How Supplied Tablets 250 mg and 500 mg in bottles of 100. Oral Suspension 125 mg and 250 mg per 5 ml in bottles to make 100 ml and 200 ml of Suspension.

Wyeth Laboratories
Philadelphia, Pa. 19101



GEORGE W. HOLCOMB, JR.

A New Beginning

The policies established by the TMA House of Delegates recently in Memphis will be reflected by a new set of officers for the coming year. As we face the future with its uncertainties we must be mindful of the past and those who have served our Association with enthusiasm, vision, and dignity. The real work of this organization throughout the years has been done quietly and efficiently—yet enthusiastically—by physicians from the mountains of East Tennessee to the Mississippi River serving on 20 active committees, 186 members of the House of Delegates, and our most capable staff. Certainly, Allen Edmonson and the other officers guided this Association last year in a superb manner through a maze of complex issues.

Then why a “New Beginning”? Unquestionably, this will be a crucial year for the medical profession. At long last, Washington-dominated bureaucracy has been weakened; federalism now is a fact in our lives. The responsibility and the opportunity for our Association to improve the health care delivery system in the state of Tennessee are no farther away than our reception rooms, our local community, our state government and its health related agencies. We now have the chance we have been seeking to shape those programs that will dictate the amount and quality of patient care for the coming years. We must develop a cooperative effort with government, labor, hospitals, nurses, health insurers and the public to assure access to medical care for those who need it, but keeping this within the limits of our financial resources. This is necessary in spite of rising unemployment and interest rates, budget cuts in health programs and an uncertain economy, all of which impact upon medical care. This effort will require more from all of us in terms of time, thought, and committee service. Our efforts will not succeed without each member’s interest, support, ideas, and even complaints. This year *you* really can make a difference.

Our profession faces many challenges in these changing times. Let us be thoughtful in our deliberation, careful and intelligent in our decisions. We cannot afford to be on the sideline with excuses.

It’s a new day with a “New Beginning” for medicine as a group and for each of us as individual physicians.

Will you help?

George Holcomb Jr MD

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hodley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. MCCALLUM, M.D., Chairman, Henderson

WINSTON P. CAINE, JR., M.D., Chattanooga

GEORGE W. SHANNON, M.D., Jackson

DILLARD M. SHOLES, JR., M.D., Johnson City

FRANCIS W. GLUCK, M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

MAY, 1982

editorials

Less for More

Back in the dim recesses of time I installed a pencil sharpener in the lab so that even when my wits weren't so sharp, what I used to transfer their products to paper would be. This morning I found that hardy, handy, crank sharpener replaced by a fancy box, which, I was informed, was an electric pencil sharpener. I carefully inserted the pencil and drew back a nub. I was told

it has an automatic cut-off, but I did not find out what that means. What I did find out was that you must take care to get the pencil in straight the first time, as you have no control over the mechanism. It just grinds away at its own speed, which is fast. If you are in tune, everything is fine—just the right pressure, just the right angle, just the right moment of egress. If not, too bad. It's a small thing, I know, in this day of trillion dollar budgets, but I predict our outlay for pencils will triple.

I suppose I am simply being reactionary, but on the other hand I have noted with interest the reluctance of our astronauts to "go automatic," and wherever possible to fly their spacecraft themselves. When Buzz Aldrin landed the first "Lem" on the moon for Neil Armstrong's "one small step," he landed it. I have noticed also that, being pilots to a man, those flying the space shuttle Columbia have *flown* it in for landing. They were in control, not some box in Houston, or wherever.

There is no question that without those boxes we would never have made it to the moon. Without automation our laboratories would fall woefully behind schedule and the cost for the simplest procedure would be prohibitive, since the major cost for anything nowadays is human labor.

There is nothing wrong with automation, or with labor-saving devices either, and I do not wish to be categorized as being against progress. Notwithstanding warnings they would snatch away your breath and you would die if you rode in one, the railroad train and the automobile have proved a big improvement over the horse, at least for getting somewhere in a hurry. On the other hand, the Army is considering reactivating its cavalry, as there is terrain that nothing else will negotiate. There is also no question that the vacuum cleaner beats the broom and dust mop all hollow—unless, of course, you are trying to clean in a corner or under the bed. I have difficulty in visualizing the automation of any of those. I have visions of an automated vacuum cleaner gone berserk continuing on through the wall of my house and sucking up the shrubbery. On the other hand, I'll take a power lawnmower every time, and if it could be automated—well, I'd buy that.

Sharpening a pencil by hand, though, is neither all that hard nor all that time consuming. The automated sharpener is harder on pencils, it costs more both to buy and to run, and I doubt

that it will give 15 years of trouble-free service. As with a lot of the things we buy for home or office, not to mention for our medical practice and our patients, we are victims of high pressure sales tactics, and the only ones profiting are the producers and merchants—unless, of course, you get a bang out of having a shiny new electric pencil sharpener and saying, “Lookie, Mom—no hands!”

J. B. T.

Words From On High A Morality Play

Scene 1

Somewhere on the Aegean Sea

A boatload of weary fishermen are lying-to off the coast of Macedonia, keeping a weather eye on Mount Olympus, which is belching forth flaming darts and resounding with peals of thunder.

First Sailor (*clinging to the mast to keep from being swept overboard*): The Old Boy must really be in a state today.

Second Sailor (*slightly green, and cramped from hanging over the rail*): Just pray we don't founder before he calms down.

Scene 2

On old Olympus' Towering Top

Above the clouds, keeping low and zig-zagging in best commando fashion, Hermes skitters between the popping lightning bolts, and finally gaining refuge, sinks down exhausted beside his sister Hebe, who is preparing refreshments for Zeus.

Hebe: What's with Pops today?

Hermes (*between gasps for air*): I'm out doing my job—the one *he* gave me—of keeping the doctors in line, and I find everybody and his brother who has a headache flocking to see old Aesklapios because he is advertising that the CT scanner will diagnose brain tumors. I tried to stop him.

Hebe: Will it? Diagnose brain tumors, I mean.

Hermes (*fiddling with the snakes on his staff*): Sure it will.

Hebe (*putting down the amphora, and turning to face Hermes, feet planted wide apart and hands on hips*): So what is he doing wrong? Does he have one?

Hermes (*rising to face her*): Of course not, Sis. It won't even be invented for several thousand years yet.

Hebe (*sinks slowly onto her chair*): Then why is Pops so mad at you?

Hermes (*gratified to see Hebe calm down, and relieved to be able to sit and rest again*): Well, you know old Aesk is sort of a favorite of his. Aesk thinks I am picking on him, and Zeus says I'm in restraint of trade—that I'm just jealous. (*Turning, he looks pensively toward the throne, where the sky is beginning to clear.*) I reminded him that Aesklapios doesn't *have* a CT scanner, but Zeus says Aesk never said he did—that he didn't even say he could diagnose brain tumors. So is it Aesk's fault, he asks me, if all the dummies misinterpret what he says? *Caveat emptor*, Zeus says.

Hebe (*puzzled*): That's Latin. That hasn't been invented yet, either.

Hermes: That's what I told Zeus. But he said that's OK, too, because the dummies wouldn't know the difference, anyway. Then you know what he said?

Hebe: No. What?

Hermes: He said, “Now get out there and stop all that *false* advertising.”

Hebe: So why did he get mad?

Hermes: I said, “*What* false advertising?”

J. B. T.

Changing Times: Debauchery, Disaster, and Dismay

Until the concentration on words required by the study of anatomy and so on put the brakes on my reading, from the time I was in the seventh or eighth grade I was reading at the rate of two or three hundred pages or so an hour, and on a rainy Saturday I could go through three or four books with no trouble at all. The well-stocked library at the Lookout Mountain School was open summers a couple of days a week, and by the time I finished high school I had read most of the books in it. This included not only Zane Gray, Joseph Altsheller, and the Hopalong Cassidy and Tom Swift books, but such things as Stanley's account of his search for David Livingstone. Some of the books I read several times, and among those favored ones was a well-

worn, rebound copy of Ernest Hemingway's then recently written book *A Farewell to Arms*.

I have lived long enough not to be shocked by anything the human animal is capable of, infinitely varied though it is. I have tried therefore to analyze the feelings I had when I read recently that the Banning Committee of a public library had removed *A Farewell to Arms* from the shelves, along with *Huckleberry Finn* and *The Scarlet Letter*, done, they said, "to protect the children."

Some time back I noticed that Bo Derek's rather racy movie *Ten* was being shown on a local television station during "prime time." About a year ago, to while away an evening in a hotel room, my wife and I watched that much talked about film on the hotel's closed circuit TV, and though I was gratified to find it very funny, it is scarcely fare for the kiddies. I was interested, therefore, to find out how the protectors of our morals would launder it so as to make it suitable for family viewing. The answer is, of course, they didn't, or not noticeably. There is apparently some notion among the censorious that if bosoms remain covered and obscenities (usually considered to include only four letter Anglo-Saxon barbarisms) are removed, it automatically becomes "PG" rated.

I do not recall having been debauched by reading *A Farewell to Arms*. It is a beautiful, poignant work, with nothing prurient in it. Furthermore, I learned nothing conceivably of a corrupting nature from it that I did not already know by the time I was out of the first grade, even considering my classmates and I led a relatively sheltered existence in a very conservative neighborhood. Unlike their elders, older children are more interested in demonstrating the breadth of their knowledge than in protecting their young admirers' delicate sensibilities.

I also learned nothing, either in that book or elsewhere, about sleeping around and "faggotry," with which the movie *Ten* was filled, and which along with abortion, rape, and all sorts of perversions, comprise the daily fare of our news media. So what, I wondered, would the Banning Committee be protecting the children from?

I guess my feelings that greeted the revelation that *A Farewell to Arms* was banned began as outrage, progressed to dismay, and finally subsided as amusement. The incident put me in mind of the story about the black gentleman who walked into a library and demanded that all books containing the word "nigger" be removed from the shelves. The librarian responded that it

was clearly impossible to remove every volume that contained a word someone objected to, as there soon would be no books left at all. "Why, suppose," she said, "we removed all books containing the word 'bastard'?" "Yes'm," he replied, "but us niggers is organized, and you bastards ain't."

Ah, well. Times do change, don't they?

J. B. T.



R. Leon Bourland, Sr., age 72. Died January 5, 1982. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Matthew L. Davis, age 71. Died February 26, 1982. Graduate of University of Tennessee College of Medicine. Member of Campbell County Medical Society.

R. Eustace Semmes, age 96. Died March 2, 1982. Graduate of Johns Hopkins University School of Medicine. Member of Memphis-Shelby County Medical Society.

Robert W. Creech, age 66. Died March 7, 1982. Graduate of University of Tennessee College of Medicine. Member of Knoxville Academy of Medicine.



The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

David E. Eberle, M.D., Chattanooga
G. Paul Forsyth, M.D., Chattanooga
Jens David Henriksen, M.D., Collegedale
Steven Allan Smith, M.D., Chattanooga

KNOXVILLE ACADEMY OF MEDICINE

Charles F. Barnett, M.D., Knoxville
Lawrence K. Bushkell, M.D., Knoxville
Michael B. Elliott, M.D., Knoxville
James E. Gleaves, Jr., M.D., Knoxville
Allan M. Grossman, M.D., Knoxville

LAWRENCE COUNTY MEDICAL SOCIETY

Jayraj C. Shah, M.D., Lawrenceburg

MARSHALL COUNTY MEDICAL SOCIETY

David G. Alfredson, M.D., Lewisburg

McMINN COUNTY MEDICAL SOCIETY
William R. Bolin, M.D., Athens

NASHVILLE ACADEMY OF MEDICINE
Moses A. Awoniyi, M.D., Old Hickory
Peter S. Cartwright, M.D., Nashville
Richard W. Garman, M.D., Nashville
Stephen Lazarus, M.D., Nashville
Daryl L. Nichols, M.D., Nashville
Alan James Nissen, M.D., Nashville
Alphonso T. Pasipanodya, M.D., Nashville
John J. Warner, M.D., Nashville
Harvey S. Wilks, M.D., Nashville

NORTHWEST TENNESSEE ACADEMY OF MEDICINE
Cong Le, M.D., Union City
Paul J. Marsidi, M.D., Union City
K. R. Somashekar, M.D., Martin

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY
Gary L. Adelson, M.D., Kingsport
Marian L. Chamberlain, M.D., Kingsport
E. R. Kidwell, Jr., M.D., Kingsport
Gary P. Miller, M.D., Kingsport
Richard K. Reed, M.D., Kingsport

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION
Peter M. Caravello, M.D., Johnson City
Selman I. Welt, M.D., Johnson City

WILLIAMSON COUNTY MEDICAL SOCIETY
W. Michael Mullins, M.D., Franklin

personal news

Ronald D. Caldwell, M.D., has been named president of the medical staff at Bristol Memorial Hospital. Other officers elected include *Nelson E. Link, M.D.*, vice president; and *H. Austin Carr, M.D.*, secretary-treasurer.

Charles W. Hawkins, M.D., has been named chief of staff at Hutcheson Memorial Tri-County Hospital. Other officers elected include *Thomas E. Hayes, M.D.*, vice chief of staff; and *Bruce A. Elrod, M.D.*, secretary-treasurer.

Marsha Moore, M.D., Selmer, has been certified as a Diplomate of the American Board of Family Practice.

William G. Rhea, Sr., M.D., Paris, has received Gov. Lamar Alexander's Outstanding Tennessean Award, recognizing his interest in and support of the Paris Special School District.

TMA Members Receive AMA Physician's Recognition Award

Twenty-one TMA members qualified for the AMA Physician's Recognition Award during February 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Mohammad Arkee, M.D., Johnson City
Hobart H. Beale, M.D., Martin
David G. Bowers, M.D., Nashville
Colin C. D. Clarendon, M.D., Memphis
James B. Cox, M.D., Knoxville
Rufus E. Craven, M.D., Memphis
James E. Fleming, M.D., Nashville
Robert B. Gaston, M.D., Donelson
Helen A. V. Goswitz, M.D., Oak Ridge
Timothy D. Gowder, M.D., Oak Ridge
Cauley W. Hayes, M.D., Chattanooga
Robert W. Ikard, M.D., Nashville
Edward S. Kaplan, M.D., Memphis
John M. Miller, M.D., Johnson City
Oliver T. Nikolovski, M.D., Memphis
Thomas W. Orcutt, M.D., Nashville
Nathan F. Porter, M.D., Greenfield
Henry W. Scott, M.D., Nashville
Lee C. Sheppard, M.D., Jackson
Harry L. Steuber, M.D., Cookeville
David J. Switter, M.D., Nashville

national news

From the AMA's Office in Washington, D.C.

High Court Ducks FTC Issue

The American Medical Association's seven-year battle against the Federal Trade Commission on the issue of physician advertising ended in a draw before the Supreme Court.

The 4-4 tie vote on the historic case leaves standing a lower court decision upholding the FTC.

The brief "per curiam" order, with Justice Harry Blackmun abstaining from the case, did little to settle the large legal questions raised in the AMA's appeal. Justice Blackmun did not participate, apparently because he had represented medical societies in the past.

As a consequence, the 1980 decision by the U.S. Court of Appeals in New York upholding the FTC's order against the AMA is left standing. The Supreme Court decision said simply: "The judgment is affirmed by an equally divided court."

"The AMA is disappointed by the Supreme Court decision that failed definitively to resolve the important issues raised by the FTC's attempt to regulate the medical profession," said Joseph F. Boyle, M.D., AMA Board Chairman. "This has been a long drawn-out case stretching over seven years. The AMA had hoped that the Supreme Court would decide the important issues itself. It may now be appropriate for Congress to consider the issues the court failed to resolve and to clarify the law."

The AMA's appeal to the high court concerned an FTC order relating to the promulgation and enforcement of ethical guidelines in physician advertising and solicitation and physicians' contractual relationship with HMOs and group prepaid plans. A split decision by the U.S. Supreme Court means that no opinion is written, the names of the justices who voted on either side are not disclosed and the decision of the U.S. Court of Appeals for the Second Circuit (New York) is allowed to stand.

The New York Court's appeals panel by a two to one vote in 1980 upheld the FTC's 1979 order barring medical associations from interfering with physicians' attempts to advertise.

The legal issue arose in 1975 when the FTC filed a complaint against the AMA, the Connecticut State Medical Society and the New Haven County Medical Association charging that their principles of ethics forbidding false and misleading advertising were a restraint of trade. Cited by the FTC was a 1975 court decision that for the first time strictly applied the anti-trust statutes to professional associations in a case involving the Virginia Bar Association and minimum fees.

The American Dental Association, which supported the AMA's position, was also affected by the Supreme Court decision, since it has agreed to abide by the rules set out by the FTC in the AMA case.

As a result of the high court's tie vote, the original FTC order remains in effect. Under the FTC's order, the AMA cannot involve itself in any way with the advertising practices of physicians unless they are clearly false and deceptive. The position of the AMA has not been that dissemination of fee information and other nondeceptive information that will help enable patients to make an informed choice among competing professionals is ethical, but that misleading promotional practices, described as "solicitation," are unethical.

The Supreme Court heard arguments on the case last January. The AMA urged the justices to rule that the FTC doesn't have the power to interfere with ethical standards propounded for a professional associa-

tion.

The AMA's warnings to the FTC of the impact of improper advertising on patients went unheeded, said AMA counsel Newton Minnow of Chicago. "Why should the government try to stop guidelines intended to protect and benefit the public?" he asked.

In its appeal to the Supreme Court, the AMA said the case is of "enormous importance" because it allows the government "to prevent professionals who have voluntarily associated together from taking a position against promotional practices which they believe to be deceptive."

The high court's decision had not been expected until July, but when it became clear the court was deadlocked on the issue, and that there could be no final, definitive opinion, the justices decided to dispose of the case with the one sentence statement.

The AMA also had argued that the FTC doesn't have the legal authority to move against non-professional associations such as the AMA because Congress has carefully limited the agency's jurisdiction to profit organizations.

The AMA advertising case has been regarded as a leading test of the federal antitrust powers in the health field, a burgeoning legal area with scores of cases at the lower court level. Hopes that the Supreme Court would cast definitive legal guidelines and clear up much existing confusion were dashed by the justices' failure to reach a majority decision.

FTC Legislation Considered

Legislation has been introduced in the Congress that would weaken the FTC's authority. In the House, 170 representatives are cosponsoring a bill (H. R. 3722) by Reps. Tom Luken (D-OH) and Gary Lee (R-NY) that would impose a moratorium on FTC actions against state-regulated professional associations or their state and national non-profit associations. A Senate measure (S. 1984) reauthorizing the FTC contains provisions exempting state-regulated professions from the scope of the FTC jurisdiction.

AMA Urges Student Loan Support

The administration's proposal to deny medical students' participation in the Guaranteed Student Loan (GSL) program "will have a drastic effect upon the future financing of medical education," the AMA has told Congress.

Elimination of the loan program would remove about \$190 million in aid that was used by more than 40,000 medical students during the last academic year, the AMA said in a statement to the House Appropriations Subcommittee on Health.

"Access to medical education must not be allowed to become limited on the basis of individual family income," wrote James Sammons, M.D., AMA executive vice president. "We are very concerned that limiting GSL availability to only undergraduate students would be a most significant step toward limiting access to a medical education," said Dr. Sammons.

The loan program accounts for almost one-half the total amount of financial aid available to medical students, the AMA noted.

With other sources of student aid shrinking, "we are very concerned that the additional elimination of \$190 million in GSL program funds at a time when the availability of loan funds at any interest rate are being constricted will leave many qualified medical students facing increasing educational costs with no avenue for financial assistance," said the AMA.

Dr. Sammons concluded: "The future health of this nation is largely dependent upon our medical schools being able to attract the most qualified students. Elimination of GSL program participation by medical students could cause some of these students to alter their career choices. We strongly urge the committee to reject the proposal that will eliminate this vital source of financial aid to so many students."

Congress Urged to Renew Clean Air Act

Declaring that the Clean Air Act has done much to improve the overall quality of our air, the AMA has urged Congress to reauthorize the program.

"While it is clear that progress is being made nationally to improve air quality, the need remains for a sustained program to provide for continued efforts," the AMA said in a statement to the Senate Public Works Committee. "We strongly support a continuation of the Act. . . . Our primary concern remains the effect of the legislation on public health."

Discussing specific provisions, the AMA said provisions in existing law requiring standards "allowing an adequate margin for safety" should be retained. Extensions or waivers for areas that cannot comply with the national primary ambient air quality standards by the end of the year should be sparingly granted on a case-by-case basis, according to the AMA.

Current sanctions such as withholding of highway funds and sewage treatment grants are "inappropriate" and should be eliminated, the AMA said.

Strict restrictions on new emission sources are required, and there should be continued protection of pristine areas from significant air quality deterioration

by requiring strict, but reasonable, emission limitations for new sources, the AMA stated.

The AMA said it "cannot, at this time, support relaxing of emission standards for motor vehicles. If appropriate peer-reviewed scientific data demonstrate that the limitations are not required to protect the public health we could endorse relaxations."

Food Labels to Carry Sodium Data

As much as one half of all the processed foods regulated by the Food and Drug Administration (FDA) will have sodium labeling by year's end as a result of the voluntary campaign by the FDA, health educators, and the food industry.

Arthur Hull Hayes, M.D., FDA commissioner, told the AMA Conference on Sodium Labeling that some of the nation's leading manufacturers have made labeling commitments. These include General Foods, Del Monte, Procter and Gamble, Frito-Lay, General Mills, Best Foods, Quaker Oats, and Campbell Soup Company.

"We've come a long way in the past 11 months," said Dr. Hayes, "but we would be deluding ourselves if we thought that this program is anything but a beginning."

The FDA chief said that by sponsoring the Washington conference, the AMA "has again demonstrated its leadership role in encouraging the availability of more information about sodium." He noted the AMA has been actively engaged in addressing public health concerns involving sodium, salt and hypertension, including a symposium in 1978.

The FDA currently is developing proposed regulations that would require that sodium be part of the standard nutrition label. A mandatory requirement for labeling is a possibility, but Dr. Hayes said that will be decided later after receiving comments from participants in conferences such as the AMA meeting and after assessing the results of the voluntary program.

"We would consider legislation to mandate virtually universal sodium labeling only if the voluntary efforts on the part of the food industry to effect sodium reduction and more sodium labeling fail."

Lowell Steen, M.D., immediate past chairman of the AMA Board of Trustees and chairman of the conference, said that maintaining moderate dietary sodium restrictions is difficult without labeling information. "A cost-effective system of sodium labeling would be beneficial to both patients and their physicians and thus be of considerable assistance in the medical management of hypertension as well as other disorders where restriction of sodium may be required," Dr. Steen told the audience of physicians, federal officials, food industry representatives, dietitians, etc.

Pill Tattling Fosters Pregnancy

Medical organizations have renewed their attack on the administration plan to notify parents of teenage girls who receive prescription contraceptives from federally funded clinics.

George Ryan, M.D., president of the American College of Obstetricians and Gynecologists, told a news conference in Washington, D.C., that "pregnancy is the price that many will pay." Dr. Ryan said the plan "makes no sense on the grounds of health."

Young women face a five times greater chance of serious disease and death from pregnancy than from birth control pills or intrauterine devices, according to the physician.

Speaking on behalf of eight organizations, including the AMA, Dr. Ryan said many teenagers will not seek birth control services if their parents must be notified. The regulation would discriminate against poor youth because those with money could receive confidential help from private physicians, he said.

The administration proposal would require notification of parents within ten days after girls under 18 get birth control devices or pills at clinics funded by the federal government. The administration position is that parents have a right to be told of decisions which have "long-term health consequences for the adolescent."

Dr. Ryan said as many as 100,000 pregnancies might result from the administration plan.

announcements

CALENDAR OF MEETINGS

NATIONAL

June 2-4	American Society of Transplant Surgeons—Drake Hotel, Chicago
June 6-11	American Industrial Hygiene Association—Convention Center, Cincinnati
June 13-16	American College of Surgeons—Salishan Lodge, Gleneden Beach, Ore.
June 15-18	Society of Nuclear Medicine—Miami Beach Convention Center
June 17-18	Society for Vascular Surgery—Sheraton Hotel, Boston
June 22-25	American Orthopaedic Society for Sports Medicine—Tan-Tar-A Resort, Osage Beach, Mo.
June 25-26	American College of Clinical Pharmacy—Crown Center, Kansas City, Kan.

STATE

June 4-6	Southern Medical Association, Regional Meeting, Scientific Sessions (in cooperation with Vanderbilt University School of Medicine, endorsed by TMA)—Maxwell House Hotel, Nashville
----------	--



1982 POSTGRADUATE SEMINARS

- Nationally-Renowned Faculty
- Weekend Seminars
- Credit: A.M.A. Cat. I, A.A.F.P. Prescribed, A.C.E.P. Cat. I*, A.C.S.M.**, A.N.A.

Arrhythmias & Cardiac Ischemia: Diagnosis & Management*

June 11-13 Las Vegas, NV	July 30-Aug. 1 Boyne Mountain Resort Boyne, MI	September 24-25 Washington, DC
June 11-13 Virginia Beach, VA	August 13-15 Orlando, FL	October 22-23 Cincinnati, OH
July 16-17 San Francisco, CA	July 16-18 Vail, CO	October 29-31 Las Vegas, NV

Clinical Management of Coronary Disease and Dual-Mode Exercise Testing**

May 14-15 Chicago, IL	July 30-Aug. 1 Lodge of the Four Seasons Lake of the Ozarks, MO	August 20-22 Montreal, Canada
June 25-27 Newport Bch., CA	August 13-15 Monterey, CA	September 24-25 Seattle, WA
July 16-18 Tamiment Resort Tamiment, PA (The Poconos)		October 22-23 Boston, MA

ECG Interpretation & Arrhythmia Management*

May 21-22 San Francisco, CA	August 6-8 Lake Tahoe, NV	September 24-26 Las Vegas, NV
June 25-27 Orlando, FL	August 13-15 Nashville, TN	October 15-16 Atlanta, GA
July 23-25 Cape Cod, MA	August 13-15 Hilton Head, SC	October 22-23 Chicago, IL
July 30-Aug. 1 Lake Geneva, WI		

Cardiac Rehabilitation**

May 14-15 St. Louis, MO	October 15-16 Detroit, MI
September 24-25 Philadelphia, PA	October 29-30 Chicago, IL

Ambulatory Electrocardiography: Clinical Applications, Methodology & Interpretation

May 7-9 Las Vegas, NV	August 6-8 Concord Resort Kiamesha Lk., NY (The Catskills)	September 24-25 Houston, TX
June 25-26 Toronto, Canada	August 20-22 Anaheim, CA	October 1-3 San Francisco, CA
July 16-18 Orlando, FL		October 29-30 Charleston, SC

To receive information on these or other seminars,
Call: TOLL FREE 800-525-8651 ext. 123
 or 303-740-8445 ext. 123 Or Write to:
International Medical Education Corporation
 64 Inverness Drive East, Englewood, Colorado 80112

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education

Accreditation. Application: For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

May 20-21	William Meacham Society Annual Meeting, Scientific Sessions—Toledo, Ohio
May 20-22	6th Annual Vanderbilt Symposium: Diagnostic Sonography Update—1982 (17 hours)
June 3-4	Arrhythmias—A New Concept in Diagnosis and Management. Scientific Sessions, American Heart Association, Tennessee Affiliate—Memphis (9 hours)
June 4-6	Southern Medical Association Regional Meeting, Scientific Sessions
July 7-10	Vanderbilt/Bowman Gray Annual Mountain Meeting in Internal Medicine—Asheville, N.C. (12 hours)
July 27-31	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)
Sept. 20-24	Internal Medicine Review (40 hours)
Oct. 6-8	Recent Advances in Blood Banking
Oct. 7-10	Annual Frontiers in Nutrition Seminar (10 hours)
Oct. 15	Pain Management Workshop
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions
Oct. 29	Symposium on Leukemia and Lymphomas (7 hours)
Nov. 4-6	American Society for Microbiology Fall Meeting, Scientific Sessions
Nov. 17-19	Tennessee Public Health Association Annual Meeting, Scientific Sessions
Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.

Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

May 26-29	Rhinoplasty (cosponsored with Methodist Hospitals of Memphis)
July 21-24	Snowmass Cardiology Conference
Aug. 2-6	Practical Skills Workshop
Sept. 23-24	Newborn Conference
Oct. 1-2	Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)

Chattanooga

June 3-6	Family Medicine Review
----------	------------------------

Knoxville

Nov. 6-7	Loss Prevention
----------	-----------------

Nashville

May 21-22	Loss Prevention
-----------	-----------------

World's Fair

June 10-12	Otolaryngology for the Primary Care Physician (K)
June 17-19	Great Smoky Mountain Pediatric Seminar (K)
June 20-23	Family Practice Update (M)
June 21-23	Great Smoky Mountain Pediatric Seminar (K)
Aug. 19-21	Cardiology Update (M)
Sept. 2-4	Perinatology for Practitioners (M)
Sept. 9-11	Perspectives in Medical Genetics—1982 (M)
Oct. 13-15	3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology (K)
Oct. 21-23	Office Ultrasound (K)
Oct. 27-30	Cancer Concepts (K)

(K) Contact the Knoxville office for information.

(M) Contact the Memphis office for information.

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

EAST TENNESSEE STATE UNIVERSITY

May 18	Treatment of Rheumatoid Arthritis
June 15	Physicians' Practice Management

For information, contact Floyd B. Goffin, M.D., Assistant Dean, or Susan R. Hutchinson, M.P.H., Medical Program Coordinator, Department of Continuing Medical Education, ETSU, Quillen-Dishner College of Medicine, Box 19660A, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

May 23-28	13th Family Medicine Review—Session II
June 2-4	11th Update in Ob-Gyn
Oct. 31- Nov. 5	13th Family Medicine Review—Session III

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

July 26-28	Pediatric Update 1982—Kiawah Island, S.C.
Aug. 2-6	Taxes and Investments—Hilton Head Island, S.C.
Aug. 9-11	High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

MEDICAL COLLEGE OF VIRGINIA

Aug. 5-7	Pediatrics at the Beach, 4th Annual Pediatric Primary Care Conference—Sheraton Beach Inn, Virginia Beach, Va.
----------	---

For information contact Kathy E. Johnson, Box 48, MCV Station, Richmond, VA 23298, Tel. (804) 786-0494.

Hypnotic Drugs Held Useful As Treatment for Insomnia

Hypnotic drugs—sleeping pills and tranquilizers—still play an important part in the short-term management of insomnia. Curbing of these useful medications because of their potential for abuse is not justified, concludes the American Medical Association's Council on Scientific Affairs.

Drug abuse will be with us until its root causes are understood and addressed; a curb on hypnotic drugs would merely send drug abusers to other products, and many individuals would be deprived of a useful medication.

The pills and medicines are short-term answers to insomnia and should be used only for two to six weeks. Choice of drugs must be tailored by the physician to the individual patient. For some, the older sleeping pills (barbiturates) might be best. For others, the more recent tranquilizers (benzodiazepines) such as Valium and Librium might be preferred.

For long-term use in those with persistent, chronic insomnia, the AMA recommends that physicians try nondrug treatment. This might encompass psychotherapy and behavioral therapy. The doctor can offer a variety of approaches to help his patients get to sleep.

Nondrug treatments include advice to establish rigid times for retiring and arising from bed; avoid naps; avoid stimulants, including coffee and tea, in the afternoon or evening; use the bed only for sleep or sexual activity; pursue some program out of bed at times of wakefulness; establish a regular program of daytime exercise, and plan evening activities conducive to relaxation, such as hobbies, rest and hot milk.

Sleeping pills have had bad press for years because of their potential for abuse, particularly in suicides. Prescribing of all hypnotic drugs has fallen by 39% in the United States in recent years. Sleeping pill prescriptions have dropped by 77%, while use of the tranquilizers has increased.

Since insomnia is a symptom of some discomfort, physical or emotional, and is not in itself a disease, it is important to find and understand the cause in each individual, and to help work out a treatment program.

Acupuncture Gains Acceptance As Treatment for Pain

American doctors have been slow to accept acupuncture largely because it has been presented as fanciful theory based on ancient Taoist philosophy in-

volving the two major forces of yin and yang affecting the bodily energy balance. Diagnosis is based on ritualistic palpation and interpretation of an imaginary 12 different radial pulses. Decisions for treatment are based on the legendary basic elements of fire, earth, metal, water and wood.

This makes for delightful reading in the history of Oriental medicine, but is not convincing to the Western trained physician. Also, with the initial publicity surrounding former President Nixon's visit to China, the media overreacted to this novel Oriental approach to medicine and publicized it widely as a cure-all. This it is not, and hence the initial flurry of excitement soon receded.

Notwithstanding the early problems, a small but increasing number of U.S. physicians have found acupuncture to be a useful part of their practice, despite their inability to explain in terms acceptable to their colleagues how it works. For physicians faced with the necessity to treat patients with pain that is chronic and nonresponsive to the usual methods of chemical analgesia, acupuncture now seems a reasonable alternative.

Traditional acupuncturists select from among 400 or more points located on hypothetical meridians. Moderns have found that a much smaller number of points actually are needed to relieve pain. Many of these points on the body coincide with the points to which electrical leads are attached for measuring body activity, such as electrocardiograms. Some now think that acupuncture works by stimulating release of endorphins in the brains of humans. This is nature's substance for control of pain.

Much more remains to be learned about acupuncture, but the evidence is now available to place this age-old Chinese healing art, modernized to U.S. standards, on a solid scientific base. There seems little doubt that acupuncture-type stimulation can and will play an increasingly important role in the relief of pain.

Breast Cancer Screening for Younger Women Endorsed

Breast cancer screening has been recommended for all women past the age of 50, but there has been difference of opinion as to whether routine mass screening of women 35 to 50 was worthwhile in terms of cancers discovered in relation to numbers screened and cost. Screening of younger women no longer is recommended in many centers.

Several years ago the American Cancer Society and the National Cancer Institute funded the development of breast cancer detection demonstration projects to learn more about the effectiveness of mass screening programs. The first report from one of these projects at the University of Louisville School of Medicine calls attention this week to the value of screening women under 50 as well as those over that age.

The Louisville group reports on a five-year screen-

ing experience for 10,128 women at the Louisville Breast Cancer Detection Demonstration Project. The screening disclosed 163 breast cancers in women aged 35 to 74 years. Thirty-four percent of those with cancer were younger than 50 years. In 69% of the total of cancer patients the disease had not yet begun to metastasize at the time of diagnosis.

Of the 10,128 patients, 5,280 were between the ages of 35 and 50 years. In this group 38 cancers were detected in 37 patients through the screening program. Thus, one in each 140 younger women screened were found to have breast cancer. The Project has conferred screening benefit on women younger than 50 years as well as those in an older age group, by allowing diagnosis and treatment in a more localized

clinical stage (smaller tumor size and fewer number of nodes). Mammography was the most sensitive diagnostic method used, followed by physical examination.

Nathaniel I. Berlin, M.D., formerly of the NCI, who proposed the ban on mammography in the young, now says the earlier reluctance to use mass breast x-ray screening for cancer stemmed in part from fear of the hazards of the x-ray itself. We know more about the potential damaging effect of x-rays on breasts today, and are less apprehensive of potential damage, he says. Also, x-ray dose to the breast has been substantially reduced, to the point where potential benefits of screening now greatly outweigh the small possible risk, Dr. Berlin declares.

SANIBEL ISLAND, FLORIDA

House for Rent

Two bedrooms, two baths, fully equipped, airconditioned, washer, dryer, dishwasher.

On canal with private dock; close to beach, golf, tennis, and marina.

No pets please.

Rent by week or longer.

Call (615) 886-5349

FAMILY PRACTICE

S. W. Missouri

Modern and progressive 50-bed hospital. Good coverage and financial guarantees. Small community in the Ozarks close to medium size city.

For information contact:

Karlman Associates

680 Beach St., Suite 348

San Francisco, CA 94109

Telephone: (415) 775-1657

RENT MY CONDOMINIUM* AT HILTON HEAD ISLAND SOUTH CAROLINA

For more information contact:

Tom Reed

Attention: Mrs. Parton

117 East Main Street

Murfreesboro, Tennessee 37130

Telephone: (615) 890-6464

*Ocean Front—2 Bedrooms

RADIOLOGIST NEEDED Jackson, Mississippi

Three-man group, 300+ bed general hospital, need to add fourth person. Full Nuclear Medicine, Ultrasound, CT Head Division. Two years to partnership.

Send curriculum vitae to William F. Lynch, Department of Radiology, Hinds General Hospital, 1850 Chadwick Dr., Jackson, MS 39204, Phone (601) 376-2713.

SEABROOK ISLAND SOUTH CAROLINA

Luxury resort cottage. Three bedrooms, two baths with large screened porch. Five-minute walk to beach, pools, golf (two 18-hole courses), tennis, bicycling, fishing, children's activities. Twenty miles from historic Charleston. \$400/week.

Call 615-865-2558 (days) or 615-847-5969 (evenings).

EMERGENCY MEDICINE WEEKEND OPPORTUNITIES

Growing Emergency Medicine group seeking physicians to work in an Emergency Department of a small, rural, southeastern Kentucky hospital on a weekend basis. Within driving distance of Knoxville, TN and Lexington, KY. Hourly compensation plus malpractice insurance provided.

Contact Dolores Mittelstadt, Emergency Consultants, Inc., 4050 Executive Park Drive, Suite 208, Cincinnati, OH 45241 or call toll-free 1-800-543-8227.

INDEX TO PROCEEDINGS

House of Delegates—147th Annual Meeting

Call to Order.....	383	Nominating Committee Appointments.....	384
Committee on Credentials.....	383	Outstanding Physician of the Year Award...	395
Community Service Awards.....	395	Reference Committee Appointments.....	383
Committee Reports Received.....	404	Reports of Officers.....	396
Distinguished Service Awards.....	396	Report of the Board of Trustees.....	397
Election of Officers.....	384	Report of the Executive Director.....	403
House of Delegates Composition.....	405	Report of the Judicial Council.....	402
Invocation.....	383	Report of the President.....	396
Minutes Approved 1981.....	383	Report of the Secretary-Treasurer.....	401

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS LYING ON THE TABLE

CA—No. 1-81	Composition of the Association.....	385
CA—No. 2-81	House of Delegates.....	385
CA—No. 3-81	Officers.....	386
CA—No. 4-81	Officers.....	386
BA—No. 1-81	Membership and Sections/General Meetings.....	386

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

By-Law Amendment No. 1-82	Veteran Member Exemption from Requirement for License Registration.....	386
By-Law Amendment No. 2-82	Nominating Committee.....	387

RESOLUTIONS

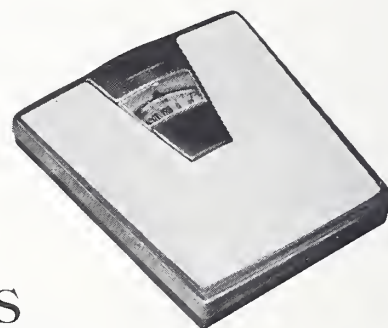
No. 1-82	Opposition to Expansion of Hospital Corporate Medical Care.....	388
No. 2-82	Cheerleader Safety.....	389
No. 3-82	Third Party Use of Certain Inappropriate Standards to Deny Medical Necessity....	389
No. 4-82	Clean Air Act.....	389
No. 5-82	TMA-Student Education Fund Assessment.....	390
No. 6-82	Freestanding Emergency Facilities.....	390
No. 7-82	Financial Support for Tennessee Medical Students.....	391
No. 8-82	Assessment for TMA-Student Education Fund.....	391
No. 9-82	Investigation and Discipline of Unethical Prescribing.....	392
No. 10-82	Medicaid Reimbursement of the Medically Needy.....	392
No. 11-82	Brain Death and Human Body Death.....	393
No. 12-82	Mandatory Postmortem Exam on Persons Under Two Years of Age DOA.....	393
No. 13-82	Community Support of Indigent Health Care.....	393
No. 14-82	Guidelines for Prescription Writing for or Dispensing of Legend Drugs by Non-Physician Personnel.....	394

Don't let previous declines, ratings or health conditions stop you from applying for TMA Life Insurance Coverage

IPSCO, your TMA life insurance plan administrator welcomes the opportunity to assist in underwriting special cases. Contact us on the following:



DIABETES
OVERWEIGHT
HIGH BLOOD PRESSURE
OPEN HEART SURGERY
OTHER SPECIAL CONDITIONS



IPSCO can give you a shot in the arm with normal or near-normal rates for you or your spouse!

Weighed down by your health problem? Call IPSCO to apply for Life Insurance which will suit your needs. We have succeeded in providing coverage to even the most difficult cases for members with virtually every type of medical history: overweight . . . cancer . . . heart disease . . . ulcers . . . alcoholism and excessive drinking . . .

tuberculosis . . . diabetes . . . asthma . . . even mental illness.

We also have placed coverage on member with hazardous hobbies at normal or near-normal rates! So don't hesitate to call your TMA Life Insurance plan administrator if you have an insurability problem.



Insurance Planning and Service Company, Inc.
822 McCallie Avenue • P.O. Box 1109
Chattanooga, Tennessee 37401

Tennessee Residents:
1-800-572-7389-Toll Free

Non-Tennessee Residents:
0-615-756-2850-Call Collect

*Abstract of the Proceedings of the House of Delegates
Of the Tennessee Medical Association
Memphis, Tennessee—April 14-17, 1982*

Call to Order

The 147th Annual Meeting of the Tennessee Medical Association was conducted in Memphis, Tennessee, April 14-17, 1982, with headquarters in the Hyatt Regency Hotel. The House of Delegates met initially at 3:00 p.m., April 14, 1982, with Charles E. Allen, M.D., Johnson City, presiding as speaker of the House and Malcolm R. Lewis, M.D., Nashville, as vice speaker.

Invocation

At the opening session, John H. Burkhart, M.D., Knoxville, gave the invocation: "Almighty God, our Father, before we begin the business of this House of Delegates, we look to you for guidance and for inspiration. We believe most fervently that as practitioners of a noble profession we have been called to be servants of God by being healers of men. We thank you for the love by which we are created, the grace by which we are sustained, and the mercy by which we are preserved. May these same qualities to the degree in which we as mortals may be capable of them determine the extent to which we respond to your call. Bestow we pray your blessings on us all, on our families, our colleagues, the societies which we represent and the work which we seek to achieve. Where we may lack the virtues of patience, endurance, fairness, respect for other opinions, open-mindedness of the sense of moral rightness, strengthen those attributes in us so that whatever we do and as this House of Delegates listens, deliberates and acts, it may be done to the greater glory of God and for the greater benefit of mankind. Amen."

Report of the Committee on Credentials

Fenwick W. Chappell, M.D., Memphis, chairman of the Committee on Credentials, reported there was a quorum present. The speaker declared the House was in session.

1981 Minutes Approved

The speaker announced that an abstract of the minutes of the last regular session of the House of Delegates was reproduced in the June 1981 issue of the *Journal of the Tennessee Medical Association*. It was moved and seconded that the abstracted minutes of the 1981 session of the House of Delegates be approved as published in the June 1981 issue of the *Journal*. The motion was adopted.

Reference Committees

The speaker announced the members of the reference committees to consider reports, resolutions, amendments, and all matters requiring action by the House of Delegates.

**REFERENCE COMMITTEE ON
CREDENTIALS**

Fenwick W. Chappell, M.D., Memphis, *Chairman*
James J. Acker, M.D., Knoxville
Will G. Quarles, Jr., M.D., Livingston

**REFERENCE COMMITTEE ON
AMENDMENTS TO THE CONSTITUTION
AND BY-LAWS**

John H. Burkhart, M.D., Knoxville, *Chairman*
Thomas R. Duncan, M.D., Columbia
Arden J. Butler, Jr., M.D., Ripley

REFERENCE COMMITTEE A

Phillip A. Pedigo, M.D., Memphis, *Chairman*
Ronald E. Overfield, M.D., Nashville
Clarence E. Goulding, Jr., M.D., Johnson City

REFERENCE COMMITTEE B

James T. Craig, Jr., M.D., Jackson, *Chairman*
John L. Farringer, Jr., M.D., Nashville
Hal Stubbs, M.D., Bristol

REFERENCE COMMITTEE C

Alfred P. Rogers, M.D., Chattanooga,
Chairman
Paul Stumb, M.D., Nashville
Hugh Francis, Jr., M.D., Memphis

REFERENCE COMMITTEE D

Hollis H. Halford, Jr., M.D., Memphis,
Chairman
W. Robert Gronewald, M.D., Morristown
Sarah H. Sell, M.D., Nashville

REFERENCE COMMITTEE ON OUTSTANDING

PHYSICIAN OF THE YEAR AWARD

John B. Dorian, M.D., Memphis, *Chairman*
James W. Hays, M.D., Nashville
George A. Zirkle, Jr., M.D., Knoxville

Nominating Committee

As required in the By-Laws, the Board of Trustees, in its January meeting, appointed a Nominating Committee with representatives from each of the three grand divisions of the state. The speaker announced the members of the committee.

EAST TENNESSEE

E. Kent Carter, M.D., Kingsport
David H. Turner, M.D., Chattanooga
George A. Zirkle, Jr., M.D., Knoxville

MIDDLE TENNESSEE

James C. Bradshaw, Jr., M.D., Lebanon
Lloyd T. Brown, M.D., Gallatin
John K. Wright, M.D., Nashville

WEST TENNESSEE

John B. Dorian, M.D., Memphis
Oscar M. McCallum, M.D., Henderson
James W. Shore, M.D., Martin

**ELECTION BY
HOUSE OF DELEGATES
APRIL 17, 1982**



**Newly elected President-Elect
Nat E. Hyder, Jr., M.D., Johnson City**

The preliminary report of the Nominating Committee was presented in the first session of the House of Delegates on Wednesday, April 14, 1982. The final report of the Nominating Committee was presented on Saturday, April 17, 1982 at the closing session of the House. Nominees submitted by the committee were voted upon individually, and in each instance, the speaker called for additional nominations from the floor. The following were elected:

President-Elect—Nat E. Hyder, Jr., M.D.,
Johnson City

Speaker—Charles E. Allen, M.D., Johnson
City

Vice Speaker—Malcolm R. Lewis, M.D.,
Nashville

Vice President (East Tennessee)—Billy J. Allen,
M.D., Chattanooga

Vice President (Middle Tennessee)—Thurman
L. Pedigo, M.D., McMinnville

Vice President (West Tennessee)—Arden J.
Butler, Jr., M.D., Ripley

AMA Delegate (East Tennessee)—David H. Turner, M.D., Chattanooga (January 1, 1983-December 31, 1984)

AMA Alternate Delegate (East Tennessee)—William O. Miller, M.D., Knoxville (January 1, 1983-December 31, 1984)

AMA Delegate (At Large)—Thomas K. Ballard, M.D., Jackson (January 1, 1983-December 31, 1984)

AMA Alternate Delegate (At Large)—George A. Zirkle, Jr., M.D., Knoxville (January 1, 1983-December 31, 1984)

TRUSTEES

Middle Tennessee:

Luthur A. Beazley, Jr., M.D., Nashville (1985)

COUNCILORS

First District—Jack E. Butterworth, Jr., M.D., Bristol (1984)

Third District—Paul E. Hawkins, M.D., Chattanooga (1984)

Fifth District—William M. Young, M.D., Fayetteville (1984)

Sixth District—Ray W. Hester, M.D., Nashville (1983)

Seventh District—Virgil H. Crowder, Jr., M.D., Lawrenceburg (1984)

Ninth District—Hobart H. Beale, M.D., Martin (1984)

THE ABOVE WERE ELECTED BY THE
HOUSE OF DELEGATES

AMENDMENTS TO THE CONSTITUTION LYING ON THE TABLE

CA—NO. 1-81

Amend Article IV, Section 5 of the Constitution of the Tennessee Medical Association by inserting:

Sec. 5. **Special members are physicians who, having previously been active members, are granted this temporary status on the basis of special circumstances such as service with the National Health Service Corps, missionary or humanitarian assignments, maternity leave, or other circumstances that warrant special consideration. Eligibility for special membership shall be determined year to year, upon receipt of personal application of the physician or an active member representing the physician, by the Board of Trustees.**

(Renumber current Sections 5, 6, 7, and 8.)

Amend Article IV, Section 1 of the Constitution to reflect the new membership category as follows:

Section 1. This Association shall consist of Active members, Associate members, Veteran members, **Special members**, Honorary members, Intern and Resident members, and Student members.

ACTION: ADOPTED

CA—NO. 2-81

Amend Article V of the Constitution of the Tennessee Medical Association as follows:

The House of Delegates shall be the legislative and business body of the Association, and shall consist of (1) delegates elected by the component societies; (2) ex-officio the Officers; (3) **Past-Presidents of the Association, providing they are members in good standing of the Tennessee Medical Association** [*the five most recent surviving Ex-Presidents of the Association, except that all Ex-Presidents who were living in April 1956 shall be members for life*]; (4) the Association's delegates to the American Medical Association; (5) the **general officers** [*elected officials*] of the American Medical Association, **members of councils elected by the AMA House of Delegates, and Past-Presidents of the American Medical Association**, provided such officials are members in good standing of the Tennessee Medical Association.

AMENDMENTS TO THE CONSTITUTION AND BY-LAWS

The speaker reported that there were four amendments to the Constitution and three amendments to the By-Laws to be considered by the House.

The proposed amendments to the Constitution and By-Laws are shown below, with proposed new language shown in **boldface** type and material to be deleted in *italics* and enclosed in brackets.

ciation; (6) the Commissioner of Public Health and the Commissioner of Mental Health and Mental Retardation for the state of Tennessee, provided such officials are members in good standing of the Tennessee Medical Association; and (7) the Editor of the Journal of the Tennessee Medical Association.

ACTION: ADOPTED

CA—NO. 3-81

Amend Article VIII, Section 3, Paragraphs 2 and 3, of the Constitution of the Tennessee Medical Association as follows:

District No. 1: Carter, [*Claiborne*,] Cocke, [*Grainger*,] Greene, [*Hancock*,] Hawkins, Johnson, Sullivan, Unicoi, Washington.

District No. 2: Anderson, Blount, Campbell, **Claiborne**, Cumberland, **Grainger**, Hamblen, **Hancock**, Jefferson, Knox, Loudon, Morgan, Roane, Scott, Sevier, Union.

ACTION: ADOPTED

CA—NO. 4-81

Amend Article VIII, Section 2 of the Constitution of the Tennessee Medical Association as follows:

Sec. 2. The Board of Trustees shall consist of the President of the Association, the Speaker of the House of Delegates, the Vice Speaker of the House of Delegates, the immediate Past-President, the President-Elect, and members elected by the House of Delegates as hereinafter provided.

Nine members of the Board of Trustees shall be elected by the House of Delegates, three from each grand division of the state. [*, and n*]

No more than two Trustees may be from any one component society.

The elected Trustees shall serve for a period of three years and no Trustee shall be eligible immediately to succeed himself, except that this provision shall not apply to a Trustee who by virtue of election or appointment has served any portion of another's unexpired term. The Board of Trustees will organize by the election of a Chairman and a Secretary-Treasurer from the nine elected as Trustees.

ACTION: NOT ADOPTED

AMENDMENTS TO THE BY-LAWS
LYING ON THE TABLE

BA—NO. 1-81

Amend Chapter I, Section 1 of the By-Laws to reflect the new membership category as follows:

Section 1. All Active members, Associate members, Veteran members, **Special members**, Intern and Resident members, Student members, Honorary members, and invited guests shall be privileged to attend all scientific meetings and take part in the discussion of all scientific questions, but Active members and Veteran members, and Intern and Resident members only shall be entitled to vote and hold office.

Amend Chapter III, Section 1 of the By-Laws to reflect the new membership category as follows:

Section 1. The General Meeting shall include all registered Active members, Associate members, Veteran members, **Special members**, Intern and Resident members, Student members, Honorary members and guests, all of whom shall have equal rights to participate in the proceedings and discussions. Each General Meeting shall be presided over by the President, or, in his absence or disability, or by his request, by one of the Vice Presidents. Before it, at such time and place as may have been arranged, shall be delivered the annual address of the President and the annual orations; and the entire time of the meeting, so far as possible, shall be devoted to papers and discussions, clinics, and demonstrations relating to scientific medicine.

ACTION: ADOPTED

AMENDMENTS TO THE BY-LAWS

BY-LAW AMENDMENT NO. 1-82

WHEREAS, It is desirable to retain Veteran members on the membership roster of the Tennessee Medical Association; and

WHEREAS, Veteran members who are fully retired from the practice of medicine, and may have no other reason to register their licenses

annually, must still pay the fee to register their licenses in order to retain TMA membership under the current Constitution and By-Laws; and

WHEREAS, This penalty to retain TMA membership appears to be both unfair and unintentional. Now therefore be it

RESOLVED, That Chapter XII of the By-Laws of the Tennessee Medical Association be amended as follows:

Section 3. Every reputable physician who is legally licensed and registered in Tennessee, or any other state of the United States, who is practicing or who will agree to practice nonsectarian medicine, shall be eligible for membership. Interns and Residents serving in approved hospitals in Tennessee and in accordance with Tennessee Code Annotated 63-605 (a), but who are not legally licensed and registered in Tennessee, shall also be eligible for membership. **Veteran members who are otherwise qualified but whose licenses have been revoked solely for failure to register shall continue to be eligible for membership.** Each component society shall judge the individual qualifications of its members. Component societies may establish an affiliate membership category for health professionals other than physicians if this is deemed appropriate for local purposes, but only physicians are eligible for membership in the Tennessee Medical Association. Only licensed and registered physicians who are Active, Veteran, or Intern or Resident members and who are members in good standing of the Tennessee Medical Association may be elected to office in a component society or to represent it in the House of Delegates of the Tennessee Medical Association. Physician members of component societies must also be members of the Tennessee Medical Association. Each component society of this Association may amend its constitution and/or by-laws to provide that the payment of dues to the American Medical Association shall be a condition of active membership in that society. Before a charter is issued to any component society, full and ample notice and opportunity shall be given to every such physician in the county to become a member.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of By-Law Amendment No. 1-82.*

ACTION: ADOPTED

WHEREAS, There is no explicit, clearly understood policy for appointing substitutes for those members of the Nominating Committee who may be unable to serve; and

WHEREAS, Nominees for office have heretofore been announced concurrently with election during the second session, thus precluding open consideration of candidates prior to the election. Now therefore be it

RESOLVED, That Chapter V of the By-Laws be amended as follows:

Section 2. On or before March 1st each year, preceding the annual session, the Board of Trustees shall consider the names of the members of the House of Delegates of the Association, and select nine delegates, from those eligible, to compose a Nominating Committee. The members of the Nominating Committee shall represent the three grand divisions of the state, with three members from East Tennessee, three members from Middle Tennessee, and three members from West Tennessee. No two members of the Nominating Committee shall represent the same county medical society. The Executive Director of the Association shall notify the secretaries of all component medical societies of the names of members of the Nominating Committee, with the request that those members named to the Nominating Committee shall be made known to the membership of each of the component societies. **If for any reason a member of the Nominating Committee is unable to serve, the Board of Trustees shall select an eligible delegate to serve.**

The Nominating Committee will be supplied by the Board of Trustees with the offices that are to be filled and elected by the House of Delegates. Any county medical society desiring to place the name of any physician in nomination for an office of the Tennessee Medical Association will have the opportunity to contact its representatives on the Nominating Committee.

It shall be the duty of the Nominating Committee to hold at least one meeting, prior to the opening session of the House of Delegates at a time and place designated by the President of the Association, elect a chairman and consider candidates for offices to be filled. The Committee shall report its selection of nominees to the House of Delegates. The Nominating Committee shall name at least one member for each of the offices to be filled at the general session.

Section 3. The report of the Nominating Committee shall be made to the House of Delegates during the first session. [and the] The election of officers shall be the first order of business of the second session of the House of Delegates.

Section 4. Nothing in this chapter shall be construed to prevent additional nominations from being made by members of the House of Delegates at either session.

REFERENCE COMMITTEE ON AMENDMENTS TO THE CONSTITUTION AND BY-LAWS—*recommended adoption of By-Law Amendment No. 2-82 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTIONS

The reference committees have the option of recommending a resolution for adoption or rejection, for adoption as amended or substituted for referral, or for no action. The resolutions that follow are in the form in which they were **adopted, not adopted, or referred** by the House of Delegates.

RESOLUTION NO. 1-82

Opposition to Expansion of Hospital Corporate Medical Care

BY: HUGH FRANCIS, JR., M.D., PRESIDENT
MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, The Tennessee Medical Association's Judicial Council has diligently sought to uphold the laws of the state of Tennessee, and the Principles of Medical Ethics of the American Medical Association; and

WHEREAS, The Judicial Council of the Tennessee Medical Association has sponsored resolutions that previously pertained to the corporate practice of medicine; and

WHEREAS, All prior resolutions have pertained to hospital-based physicians; and

WHEREAS, There has been recent interest

by hospitals operating in the state of Tennessee in establishing emergency room facilities that are not hospital based; and

WHEREAS, This represents involvement in and subsidization by a hospital corporation in the private practice of medicine; and

WHEREAS, This is not in the best interest of the delivery of medical care in the state of Tennessee; and

WHEREAS, This concept is of questionable legality in the state of Tennessee; and

WHEREAS, Hospitals and physicians in the state of Tennessee have long maintained a common goal, which is to provide the highest quality of medical care available and to not lose sight of the cost of rendering such care; and

WHEREAS, This concept (1) does not promote the patient-physician relationship which results in the best continuity of medical care, (2) encourages the patient to utilize a very expensive mode of health care delivery instead of the physician's office, (3) is a duplication of services already available in the hospital-based emergency room, (4) does not represent a bona-fide emergency room in that it does not offer the ancillary services available in a hospital-based emergency room, and (5) this concept and an ambulatory care facility are considered the same. Now, therefore be it

RESOLVED, That the medical profession in this state, through the Tennessee Medical Association and its component societies, accept the responsibility of actively opposing hospital corporations from involvement in and subsidization by a hospital corporation in the private practice of medicine; and be it further

RESOLVED, That the Tennessee Medical Association inquire of the medical insurers doing business in the state of Tennessee as to their policy in regard to coverage and reimbursement in hospital-based emergency rooms, nonhospital-based emergency rooms, and physicians' offices; be it further

RESOLVED, That no facility should be considered as hospital based unless it is physically attached to a hospital; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 1-82 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 2-82

Cheerleader Safety

BY: JAMES T. CRAIG, M.D.

CONSOLIDATED MEDICAL ASSEMBLY OF WEST
TENNESSEE

WHEREAS, The physicians of Tennessee are vitally interested in the health and well-being of the young people of Tennessee; and

WHEREAS, There has been an alarming increase in the number of injuries in high school and junior high school to cheerleaders who participate in pyramids, three, four, and sometimes five people high. Now, therefore be it

RESOLVED, That the Tennessee Medical Association strongly urge the Tennessee Secondary School Athletic Association, the Tennessee Education Association, and appropriate collegiate governing bodies to regulate such activities to prohibit pyramids of more than two people high during cheerleading activities; and be it further

RESOLVED, That a copy of this resolution be sent to these appropriate agencies expressing our concern; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 2-82 as amended.*

ACTION: ADOPTED AS AMENDED

inadequate appraisal of clinical situations, or on the use of semantic variant diagnoses, both adversely deprive patients of entitled financial assistance, and unnecessarily expose physicians to additional administrative costs and to adverse presumptions of malpractice and fraud (e.g., by patients' EOMB statements that are not easily or routinely accessible or correctable by the physician community). Now, therefore be it

RESOLVED, That the TMA's Board of Trustees be requested to carry out the following through its Committee on Governmental Medical Services and/or other appropriate committees: (1) collect and evaluate medical necessity/appropriateness standards as currently being applied (e.g., by Blue Cross/Blue Shield and the Medicare/Medicaid carriers), (2) establish and publicize mechanisms to collect and review physicians' objections to such standards, and (3) seek correction for any suboptimal standards; and be it further

RESOLVED, That a progress report be brought back to this House of Delegates in 1983; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 3-82 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 3-82

Third Party Use of Certain Inappropriate Standards to Deny Medical Necessity

BY: W. ROBERT GRONEWALD, M.D.

LAKeway MEDICAL SOCIETY

WHEREAS, Concepts of medical necessity and appropriateness are being integrated into third party medical payment mechanisms, for purposes of cost control; and

WHEREAS, Some standards so generated by third parties are faulty, being contrary to currently acceptable medical practice, and not easily correctable, by either patient or physician; and

WHEREAS, Third party denials of reimbursement based on such faulty standards, or on

RESOLUTION NO. 4-82

Clean Air Act

BY: E. HARRIS PIERCE, M.D.

BRADLEY COUNTY MEDICAL SOCIETY

WHEREAS, The Tennessee Medical Association House of Delegates passed Resolution No. 9-80 recommending restricted areas for sale and use of tobacco in hospitals; and

WHEREAS, The Tennessee Medical Association House of Delegates passed Resolution No. 16-81 establishing an Ad Hoc Committee on Smoking; and

WHEREAS, The Tennessee Medical Association House of Delegates passed Resolution No. 31-81 related to tobacco advertising; and

RESOLUTION NO. 5-82

TMA-Student Education Fund Assessment

BY: ROBERT W. IKARD, M.D.

NASHVILLE ACADEMY OF MEDICINE

WHEREAS, Physicians and most people are aware that smoking is one of our nation's most serious preventable health hazards; and

WHEREAS, The health cost of smoking to society has been estimated to be \$27.6 billion annually; and

WHEREAS, The Surgeon General of the United States quoted on 2/22/82 "Cigarette smoking is clearly identified as the chief preventable cause of death in our society"; and

WHEREAS, Thirty percent of all cancer deaths have been attributed to smoking; and

WHEREAS, Japanese, American, and Greek studies have indicated that inhalation of cigarette smoke is almost as dangerous as primary inhalation; and

WHEREAS, Alaska, Arkansas, California, Colorado, Connecticut, Florida, Hawaii, Iowa, Kansas, Maryland, Massachusetts, Michigan, Minnesota, Montana, Nebraska, Nevada, New Hampshire, New York, North Dakota, Oklahoma, Oregon, Rhode Island, South Dakota, Texas, and Utah have passed Clean Air Acts protecting their citizens as much as possible from this hazard. Now, therefore be it

RESOLVED, That the Tennessee Medical Association recommend and petition the State Legislature to pass a Clean Air Act which limits smoking in elevators, theaters, schools, hospitals, and public transportation; and be it further

RESOLVED, That the Tennessee delegates to the American Medical Association House of Delegates be asked to submit this resolution at their next convened meeting encouraging each state to pass a Clean Air Act; and be it further

RESOLVED, That the House of Delegates notify the Governor of the state of Tennessee, the Commissioner of Public Health, and all members of the State Legislature of this resolution encouraging passage of a Clean Air Act for the state of Tennessee; and be it further

RESOLVED, That smoking be prohibited in the meetings of the House of Delegates and scientific sessions of the Tennessee Medical Association; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE B—*recommended adoption of Resolution No. 4-82 as amended.*

ACTION: ADOPTED AS AMENDED

WHEREAS, Resolution No. 10-81 was passed by the House of Delegates of the Tennessee Medical Association in 1981; and

WHEREAS, This resolution authorized a \$10 per member annual assessment for a period of five (5) years beginning with the 1982 billing for the sole purpose of creating capital for the TMA-Student Education Fund (TMA-SEF); and

WHEREAS, TMA plans to declare those members who do not choose to pay this assessment delinquent in their dues. Now, therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association declares that the \$10 per member annual assessment for the TMA-SEF is a voluntary assessment for 1982 applicable to active members of the Association; and be it further

RESOLVED, That this resolution shall take effect immediately upon its passage, therefore being before April 30, 1982 after which 1982 dues are declared delinquent; and be it further

RESOLVED, That TMA dues be increased by \$10 per year beginning in 1983 which is to be used only to support the TMA-SEF; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 5-82 as amended, and that Resolution No. 5-82 be accepted as a substitute for Resolutions No. 7-82 and 8-82.*

ACTION: ADOPTED AS AMENDED (Serves as a substitute for Resolutions Nos. 7-82 and 8-82.)

RESOLUTION NO. 6-82

Freestanding Emergency Facilities

BY: HUGH FRANCIS, JR., M.D., PRESIDENT
MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, There has been a proliferation of freestanding emergency facilities throughout

the state the past few years; and

WHEREAS, There is general concern among health care providers in the state with respect to the quality of care delivered by these facilities; and

WHEREAS, There are currently no licensing procedures or regulations in Tennessee to insure delivery of quality medical care by these facilities. Now therefore be it

RESOLVED, That the Emergency Medical Services Committee of the Tennessee Medical Association continue to develop guidelines for the overall operation of freestanding emergency facilities in Tennessee; and be it further

RESOLVED, That these guidelines be enacted by the Tennessee Board for Licensing Health Care Facilities in the form of regulations or by the Tennessee General Assembly in the form of legislation, whichever is more appropriate and expedient; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE C—*recommended adoption of Resolution No. 6-82.*

ACTION: ADOPTED

RESOLUTION NO. 7-82

Financial Support for Tennessee Medical Students

BY: PATRICK J. MURPHY, M.D., MEMPHIS

WHEREAS, We as physicians support the need for physicians in the United States and the state of Tennessee; and

WHEREAS, The cost of living and tuition costs have gradually increased in the United States and the state of Tennessee; and

WHEREAS, The federal government has seen fit to decrease support to medical schools of our country; and

WHEREAS, We as physicians realize that we have an obligation to aid our successors who are now in medical school as others helped us when we were in the same situation. Now therefore be it

RESOLVED, That the House of Delegates of the Tennessee Medical Association immediately form a non-profit association that will request from each physician in the state of Tennessee the

amount of \$1,000 per year (\$100 monthly for ten months) for five years in order to form a fund for lending money on a yearly basis to medical students at a low rate of interest which will then be repayable after the student finishes his post-graduate internship and residency (not to exceed five years). This fund will then become self-perpetuating for future use of medical students; and be it further

RESOLVED, That the use of money from this fund be restricted to students who are residents of the state of Tennessee and who enroll in medical schools in the state of Tennessee; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE C—*recommended nonadoption of Resolution No. 7-82; recommended Resolution No. 7-82 be substituted by Resolution No. 5-82.*

ACTION: NOT ADOPTED (Was substituted by Resolution No. 5-82, which was adopted.)

RESOLUTION NO. 8-82

Assessment for TMA-Student Education Fund

BY: HUGH FRANCIS, JR., M.D., PRESIDENT
MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

WHEREAS, On April 11, 1981, the House of Delegates in its wisdom adopted a resolution authorizing a \$10 per member annual assessment for a period of five years beginning with the 1982 billing for the sole purpose of creating capital for the TMA-SEF; and

WHEREAS, Termination of federal capitation payments to medical schools, cuts in the State budget for medical education, and inflation have led to a dramatic increase (75% to 100% plus) in tuition for medical students at a time when financial aid sources for students are decreasing; and

WHEREAS, The administration's proposal to exclude graduates and professional students from the guaranteed student loan program, which is now based strictly on financial need, would have a devastating effect on 72% of all medical students who use this program; and

WHEREAS, Alternative federal loan pro-

RESOLUTION NO. 10-82

Medicaid Reimbursement of the Medically Needy

BY: HAYS MITCHELL, M.D.
BRADLEY COUNTY MEDICAL SOCIETY
TENNESSEE PEDIATRIC SOCIETY
TENNESSEE CHAPTER,
AMERICAN ACADEMY OF PEDIATRICS

grams, such as HEAL, ALAS, and PLUS are almost prohibitive due to the high interest rates (14% to 19.5%) which accrue and are payable during periods of enrollment; and

WHEREAS, Without the availability of financial aid sources, many qualified students from middle and low income families will not be able to pursue a medical education; and

WHEREAS, It is obvious that financial assistance to needy medical students must become the primary responsibility of the private sector. Now therefore be it

RESOLVED, That the House of Delegates perpetuate the \$10 per member annual assessment to the TMA-SEF; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE C—*recommended nonadoption of Resolution No. 8-82; recommended Resolution No. 8-82 be substituted by Resolution No. 5-82.*

ACTION: NOT ADOPTED (Was substituted by Resolution No. 5-82, which was adopted.)

RESOLUTION NO. 9-82

Investigation and Discipline of Unethical Prescribing

BY: E. C. CUNNINGHAM, M.D.
ROANE-ANDERSON COUNTY MEDICAL SOCIETY

WHEREAS, The illegal use of drugs comes under increasing public scrutiny. Now, therefore be it

RESOLVED, That the Tennessee Medical Association recommend or urge that the State Board of Medical Examiners continue increasing their efforts to investigate and stringently discipline any unethical prescription or dispensing of controlled substances; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 9-82 as amended.*

ACTION: ADOPTED AS AMENDED

WHEREAS, The Tennessee Medicaid Administration now allows reimbursement for primary medical care of the "medically needy" in a community clinic but *not* in a physician's office; and

WHEREAS, Many of these clinics offer fragmented, 5-day/week, daytime care at a higher cost per encounter than in a physician's office; and

WHEREAS, Many of these clinics are staffed by physician extenders without "on-site" physician supervision; and

WHEREAS, Our new E.P.S.D.T. program has recruited over 200 private physicians as providers; and

WHEREAS, The "medically needy" E.P.S.D.T. recipients *are* covered in a physician's office for the "screen" as well as follow-up treatment of chronic conditions found in the "screening" process—but not for acute illnesses. Now therefore be it

RESOLVED, In order to avoid this fragmented, more expensive, non-physician medical care for the "medically needy," the TMA House of Delegates urge the Medicaid Administration to cover this group of Medicaid recipients *in the physician's office*; and be it further

RESOLVED, That a copy of this resolution be sent to the Governor, the Commissioner of Public Health, and Representative Paul Starnes, Chairman of the Medicaid Legislative Study Committee; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 10-82.*

ACTION: ADOPTED

RESOLUTION NO. 11-82

Brain Death and Human Body Death

BY: RICHARD L. HOBART, M.D.
KNOXVILLE ACADEMY OF MEDICINE

WHEREAS, The Tennessee law with respect to brain death states, "For all legal purposes, a human body, with irreversible cessation of total brain function, according to the usual and customary standards of medical practice, shall be considered dead" is found in Tennessee Code Annotated Section 53-459, and was enacted in 1977; and

WHEREAS, Physicians, nonetheless, in Tennessee have great difficulty in determining the time of human body death because of ethical, moral, philosophical, and other reasons; and

WHEREAS, The need for organ donors for transplant recipients far outnumbers the present supply; and

WHEREAS, Many prospective organ donors are lost because of physicians' inability to determine the time of human body death in a reasonably rapid fashion; and

WHEREAS, The currently accepted criteria for determining total brain death and thus human body death are unclear in many Tennessee physicians' minds. Now, therefore be it

RESOLVED, That the Tennessee Medical Association reaffirm its support for the current definition of death in Tennessee; and be it further

RESOLVED, That the Tennessee Medical Association further clearly take the position that any individual who has sustained either (1) irreversible cessation of circulatory and respiratory functions or; (2) irreversible cessation of all functions of the entire brain including the brain stem is dead; and be it further

RESOLVED, That this information be written and disseminated by publication and other educational means to the general physician population throughout the state; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 11-82 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 12-82

Mandatory Postmortem Exam on Persons Under Two Years of Age DOA

BY: RICHARD L. HOBART, M.D.
KNOXVILLE ACADEMY OF MEDICINE

WHEREAS, There is a significant number of pediatric patients under 2 years of age who present to Tennessee hospital emergency departments dead on arrival each year; and

WHEREAS, In Tennessee, only the coroner or medical examiner can order an autopsy on such patients if there is reasonable cause to expect foul play; and

WHEREAS, It is in the best interest of present and future pediatric health care to determine causation of sudden and unexplained death in this age group; and

WHEREAS, There is needed mechanism to insure that autopsies are performed automatically when a pediatric patient presents to a medical facility dead on arrival. Now therefore be it

RESOLVED, That the Tennessee Medical Association recommend to the Tennessee state legislative bodies the enactment of a statute which would automatically implement a system whereby autopsies would be performed on all persons under age two presenting to a Tennessee medical facility dead on arrival; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE A—*recommended referral of Resolution No. 12-82 to TMA Board of Trustees for appropriate action.*

ACTION: REFERRED TO TMA BOARD OF TRUSTEES

RESOLUTION NO. 13-82

Community Support of Indigent Health Care

BY: RICHARD L. HOBART, M.D.
KNOXVILLE ACADEMY OF MEDICINE

WHEREAS, The indigent populations of the state of Tennessee are in great numbers in both metropolitan and rural areas; and

WHEREAS, The medical care of these indigent populations have been shouldered by a minority of health care providers; and

WHEREAS, Because of increasing costs of needed health care delivery to this population and decreased funding for such care, these patients may tend to receive suboptimal care; and

WHEREAS, The general community as a whole has a responsibility to support reasonable medical needs of area indigent populations. Now, therefore be it

RESOLVED, That the Tennessee Medical Association support the position that indigent health care for any area be supported, planned for, and funded by each county included therein; and be it further

RESOLVED, That a system should be devised whereby each community through some funding mechanism should care for its medically indigent through a fair and reasonable approach; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 13-82 as amended.*

ACTION: ADOPTED AS AMENDED

RESOLUTION NO. 14-82

Guidelines for Prescription Writing for or Dispensing of Legend Drugs by Non-Physician Personnel

BY: JOHN J. INGRAM, III, M.D.
BLOUNT COUNTY MEDICAL SOCIETY

WHEREAS, Prescription writing for or dispensing of a legend drug entails a finite risk and financial responsibility for the patient; and

WHEREAS, Prescription writing for or dispensing of a legend drug should be performed only by a person well trained in the science of pharmacology, the pathologic and clinical manifestations of disease, and the intricacies of drug interactions and adverse reactions; and

WHEREAS, Prescription writing for or dispensing of a legend drug involves ethical, medical, and legal responsibilities of the physician for his/her patient not to be dismissed lightly or del-

egated to others not licensed for this purpose; and

WHEREAS, There is a growing practice in the state of Tennessee of physician sponsors allowing and encouraging nurse practitioners, physician's assistants, and other paramedical personnel for whom they are responsible to write prescriptions for or dispense legend drugs with minimal or no direct supervision and personal knowledge, review, and involvement. Now, therefore be it

RESOLVED, That the Tennessee Medical Association hereby declares that it opposes and condemns prescription writing or dispensing of legend drugs by nurse practitioners, and other paramedical personnel whose functions are not delineated by law nor licensed for this purpose without the supervision of a licensed physician who reviews the patient's condition with the non-physician practitioner and who assumes responsibility for the writing of the prescription or the dispensing of the legend drug; and be it further

RESOLVED, That the Tennessee Medical Association hereby urges the Board of Medical Examiners to require each physician using nurse practitioners, physician's assistants, and other paramedical personnel to have on file in the office of the Board the physician's protocol for responsibilities delegated to the nurse practitioner, physician's assistant, or other paramedical personnel; and be it further

RESOLVED, That the Tennessee Medical Association urges the Board of Medical Examiners to proceed with promulgation of rules and regulations pertaining to joint practices, i.e., nurse practitioners, and paramedical personnel to insure adequate supervision; and be it further

RESOLVED, That a copy of this resolution be sent to all Tennessee county medical societies with the request that each society forward the resolution to all known clinics and offices staffed by nurse practitioners and other paramedical personnel, as well as their sponsoring physicians, to notify all affected persons of these recommended guidelines; and be it further

RESOLVED, That this resolution, unless reaffirmed or modified prior thereto, shall terminate after the regular annual meeting of the House of Delegates in 1989.

REFERENCE COMMITTEE A—*recommended adoption of Resolution No. 14-82 as amended.*

ACTION: ADOPTED AS AMENDED

TENNESSEE'S OUTSTANDING PHYSICIAN OF THE YEAR

Phil C. Schreier, M.D.

The Tennessee Medical Association's most coveted honor, the Outstanding Physician of the Year Award, was presented to Phil C. Schreier, M.D., Memphis. In its opening session, the House of Delegates was presented with three nominees and elected Dr. Schreier as the physician to recognize in 1982 for outstanding achievement.

In his sixty years of practicing medicine, Dr. Schreier has made innumerable contributions as an educator and a practitioner.

In nominating Dr. Schreier, Hugh Francis, Jr., M.D., president of the Memphis-Shelby County Medical Society, said, "His greatest contribution has been his selfless devotion to the education of countless young men and women entering the practice of obstetrics and gynecology. Few men have had such a positive influence on the professional lives of so many."

Dr. Schreier was born on April 24, 1897. He graduated from St. Aloysius High School, Vicksburg, Mississippi, in 1914 and received his bachelor's degree from the University of Mississippi in 1918. He received his medical degree in 1920 from the University of Pennsylvania. He completed a one-year internship and a two-year residency in obstetrics and gynecology at the University of Pennsylvania Hospital.

He began practice in Memphis in 1923. From 1953 to 1955, he was professor and chairman of the Department of Obstetrics and Gynecology at the University of Tennessee College of Medicine. From 1969 to 1976, Dr. Schreier was director of obstetrics and gynecology in the residency program at Baptist Memorial Hospital in Memphis.

Since 1967, Dr. Schreier has been professor emeritus of the Department of Obstetrics and Gynecology at the UT College of Medicine in Memphis.

He is a Diplomate of the American Board of Obstetrics and Gynecology. He is a member of the American College of Obstetrics and Gynecology, Tennessee Obstetrical and Gynecological Society, Memphis Obstetrical and Gynecological Society, American Medical Association, TMA and his local medical society.

In 1981, the National Conference of Christians and Jews gave him its Community Service Award as Outstanding Physician.

Schreier Auditorium at the Student Center of the UT Center for the Health Sciences in Memphis is named in his honor. Also named in his honor is the Schreier-Guttmacher Planned Parenthood Center of the Memphis Planned Parenthood Association.

Dr. Schreier continues to stay abreast of developments in his field of specialty and is in practice with three of his pupils in Memphis.

The Tennessee Medical Association was honored to present its 1982 Outstanding Physician of the Year Award to Phil C. Schreier, M.D.

COMMUNITY SERVICE AWARDS

Each year, the Tennessee Medical Association is privileged to present its Community Service Award to citizens who have made significant contributions to their community and state in the very broad field of health care. This year, TMA recognized the contributions of two distinguished Tennesseans—a Knoxville registered nurse and a Jackson minister.

Mrs. Nancy Kerr, R.N., was born of British parents in Malaya. She received her nursing training at Southampton Hospital in England. She met her husband, Jim, a Knoxville, during World War II. In 1956, she became a naturalized citizen of the United States.

In 1978, Mrs. Kerr was chosen to head the Fort Sanders Regional Medical Center's hospice program, the first in Tennessee. Previously, she had worked in the Knoxville medical center's various departments as a charge nurse and staff nurse.

Mrs. Kerr has worked tirelessly in behalf of the medical center's hospice program since its inception. During the initial year of the program, she was the only nurse calling on the terminally ill, on call 24 hours daily. Over the years, she has given numerous speeches to civic clubs, church groups and businesses on the work of the hospice program, as well as many news media interviews to explain the program.

Her considerate and professional attention to her responsibilities has been of inestimable value to the success of the hospice program.

The TMA Community Service Award was proudly given to Mrs. Kerr as a token of respect and appreciation from the state's physician community.

Mr. Harold Logan Montgomery has been executive director of the Jackson Area Council on Alcoholism and Drug Dependency since 1976. He was co-director of the agency in 1975, director of therapy from 1974 to 1976 and counselor and educator with the agency since 1970.

From 1960 to 1968, the graduate of Giles County High School in Pulaski was a full-time minister with the Memphis Annual Conference, United Methodist Church. During the period of 1970 to 1978, he served as a part-time minister at Enville Parish United Methodist Church.

Mr. Montgomery served as a sergeant and weather observer in the U.S. Air Force and was honorably discharged in 1952. He received his bachelor's degree from Lambuth College in Jackson in 1957 and a master of divinity degree from Vanderbilt University in 1960.

He has served as regional vice president of the Tennessee Conference on Social Welfare and is a member of the Tennessee Substance Abuse Counselors Certification Task Force and Committee.

The TMA Board of Trustees was very proud to honor Mr. Montgomery with the TMA Community Service Award.

DISTINGUISHED SERVICE AWARDS

The Distinguished Service Award is presented annually by the Board of Trustees of the Tennessee Medical Association to physician members who have made eminent contributions to the public welfare or to the advancement of medical science. At the 147th Annual Meeting of TMA on April 14-17, the Chairman of the Board of Trustees announced that there were two recipients of this award in 1982.

Martha S. Bushore, M.D., 36, Knoxville pediatrician, was born in Knoxville and graduated from the University of Tennessee in 1967. She received her M.D. degree at the university's medical units in 1967-1970.

Nominated for the award by the Knoxville Academy of Medicine, she was cited for her efforts on behalf of passage of the Tennessee seat belt restraint law. She assisted Robert Sanders, M.D., Murfreesboro, who received the Distinguished Service Award in 1980, in getting legislation enacted to require the seat belt restraint of children riding in motor vehicles.

She has been responsible for improvement of the emergency care of children and recently was elected chairman of the Emergency Medical Committee of the American Academy of Pediatrics. She has been a clinical instructor in pediatrics since 1974 at the University of Tennessee Memorial Research Center and Hospital.

Dr. Bushore serves as director of emergency and inpatient medical services, chief of medicine and chairman of the acute care committee of East Tennessee Children's Hospital in Knoxville. She is active as a lecturer on pediatric emergency medicine to physicians and allied health personnel as well as to business and civic groups. She serves on the family practice teaching faculty of the University of Tennessee Hospital and is a charter member of the National Child Passenger Safety Association.

Through her efforts, a \$2,500 grant was obtained from Allied Chemical Company to be used in the educational promotion of the Tennessee seat belt restraint law.

For these and many other accomplishments, the Board of Trustees was pleased to present this award to Dr. Bushore.

Sam B. McFarland, M.D., 75, Lebanon surgeon and family practitioner, is a well-known Wilson County physician who has made significant contributions to his profession and community over many years. He comes from a long line of physicians. There has been a Dr. McFarland in Wilson County since March, 1841.

He graduated from Wilson County schools, David Lipscomb High School and college and the University of Tennessee College of Medicine. He served his internship at Grace Hospital of Detroit, Michigan.

On August 30, 1980, he was honored with a Dr. Sam McFarland Day in Wilson County and a dinner at Friendship Christian School to which he has made many contributions. At the dinner, he received the Governor's Outstanding Tennessean Award and several proclamations of appreciation from the community. Last February, he was honored by David Lipscomb College with a luncheon and presentation of the Alumnus of the Year Award. One of Lipscomb's lecture halls is named in his honor.

Nominated for the Distinguished Service Award by the Wilson County Medical Society, Dr. McFarland is a member of the Board and past president of the McFarland Hospital and medical staff in Lebanon, life member of the Southern Medical Association, fellow of the International College of Surgeons, and life member of the American Society of Abdominal Surgeons. Dr. McFarland is chairman of the board of Friendship Christian School and a member of the College Street Church of Christ.

His civic and professional achievements would fill a book. One of his colleagues commented, "Dr. McFarland is loved in Wilson County and the surrounding area as a great family physician."

Dr. McFarland certainly has the respect and admiration of this Association and is truly deserving of the Distinguished Service Award.

REPORTS OF OFFICERS

Report of the President

ALLEN S. EDMONSON, M.D.

The major issues and events of this past year will be covered in detail in the reports of your other officers and in the numerous committee re-

ports. My views have been published in the President's Page of the *Journal*. My service as your 152nd president has been a pleasure and a privilege for me. The combined efforts of most of you have been responsible for whatever progress we have made.

During this, my last official report, several

matters need comment.

(1) Medicaid continues to be a problem both from operation and funding. There are currently available innovations in the operation and patient-physician relationship which seem to benefit both patients and physicians. We must be willing to try some of these and convince the bureaucrats of their value.

(2) Hospital relationships are changing, not only with other hospitals, but with medical staffs. The entry of some hospitals into competition with private physicians for outpatients by opening satellite clinics has created an interesting situation. Private physicians in their offices with continuity of care and other advantages should be able to meet the challenge, but in some respects hospital-medical staff relationships will surely change.

(3) Reductions in federal health care funds have created numerous challenges for physicians. Prospects for the future are for even more cuts. Physicians are increasingly being required to make the decisions as to which patients get "full" care and which patients get "rationed" care. As funds get tighter, all governmentally funded care may be rationed so that some patients could conceivably become "ineligible" and get none. We are beginning to see this now in some programs.

(4) Medical associations have made great progress in assuring a healthy future by integrating first, housestaff officers and now, medical students. If medical students are to continue to participate, and it's to everyone's advantage that they do so, some method to give them a voice must be devised.

The continued efficient operation of our Association depends in great part on our staff. Their professionalism is obvious to all of us who frequently are in contact with them. We appreciate them and our Board of Trustees for keeping us moving this year.

REFERENCE COMMITTEE C—*reviewed the report of the President, thanked Dr. Edmonson for a year of good leadership and progress in the cause of providing ever-improved medical services to the citizens of Tennessee, and recommended that the report be filed.*

Report of the Board of Trustees

JAMES C. BRADSHAW, JR., M.D., *Chairman*

The Board of Trustees convened on six occasions during the past year and the Executive Committee met two additional times. The Association's expanding business continues to make heavy demands upon the time of the trustees and the Association's officers. In fulfilling its obligation to the Association, the Board and Executive Committee acted upon 163 separate agenda items of business during the year. In addition, numerous telephone conferences and mail polls were taken. Abstracted Minutes of the Meetings of the Board of Trustees have been highlighted in the *Journal* in the first available issue following the Board meetings.

The Board has dealt with various matters arising from its responsibilities or brought to its attention, including correspondence from members, component societies, the AMA, and allied organizations. Committees of the Board function in the areas of finance, publications, specialty society liaison, long range planning, travel, utilization of Medicaid data, voluntary cost containment and scientific affairs. Major health issues facing Tennessee physicians receive the Board's attention at each quarterly meeting. As the Association's policymaking body during the interim between sessions of the House of Delegates, the Board supervises all property, financial affairs, and personnel employed to conduct the daily business of the Association.

In addition, Board members attended various state and national meetings and conferences of concern to TMA, acted upon reports and recommendations of committees, and maintained liaison with the Tennessee Hospital Association and other allied organizations and various departments of state government. Individual members of the Board attended 11 meetings of county medical societies across the state during the year and the President represented the Board and TMA at four additional county society meetings. It is the desire of the Board to maintain close liaison with county medical societies in order to keep the membership abreast of TMA activities and to bring back to the Board the areas of concern expressed by members of the county societies. Such grass roots visits will continue to be made in the future. I urge each com-

ponent county society to make time available for visits from TMA officers and members of the Board of Trustees.

Abstracted highlights of the most significant items of business acted upon by the Board and its Executive Committee during the past year follow:

Second Quarter Board Meeting—April 11, 1981

The Board:

- Elected a chairman, vice-chairman, secretary-treasurer and assistant secretary-treasurer.
- Elected an Executive Committee and six committees of the Board.
- Named division coordinators for five TMA divisions.
- Named Board members to serve as liaison with various medical specialty societies.
- Reaffirmed the Board's position that the obligation and right of the Board of Trustees and/or governing body of each hospital in the state to grant staff appointments and determine practice privileges of health professionals seeking to practice in their institutions.
- Acted upon a request from the Tennessee Academy of Ophthalmology directing that TMA legal counsel investigate the problem of non-physicians attempting to practice medicine in Tennessee.
- Endorsed the candidacy of Dr. A. Roy Tyrer, Jr., for a position on the Board of Trustees of the AMA.
- Directed that 1982 dues billing statements include a \$10 assessment as ordered by the House in Resolution 10-81 for the TMA Student Education Fund.
- Directed staff to notify each newspaper in Tennessee in regard to Resolution 31-81 pertaining to tobacco advertising.
- Directed that the staff develop a plan to implement Resolution 33-81 regarding a program of continuing education for noncertified personnel involved in the delivery of x-ray services in physicians' offices.
- Appointed a committee to implement Resolution 36-81 and to investigate the potential impact of hospital expansion into ambulatory services.
- Directed that the state Commissioner of Insurance be informed of Resolution 29-81 regarding the use of the phrase "usual, customary, and reasonable."
- Received for information a report regarding

the Malpractice Review Board.

- Recognized and commended TMA staff in the planning and implementation of the 1981 Annual Meeting.

Executive Committee Meeting—June 14, 1981

The Committee:

- Received for information a report regarding a change in the fiscal intermediary for the state's Medicaid program.
- Directed that the appropriate medical specialty societies be requested to provide nominations of physicians to serve on the patient Qualification Review Board to determine the use of marijuana in cancer patients.
- Referred previous Board policy to the state Public Health Council in response to a request from the Council regarding hospital staff privileges.
- Directed the Legislative Committee to appoint a subcommittee to develop a radiation safety program.
- Discussed a motion that the Executive Committee consider a new means of redistricting the state in regard to the rotation of TMA officers.
- Heard from Commissioner of Public Health, Dr. Eugene Fowinkle, regarding a public service campaign and approved TMA to cosponsor the Healthstyle promotion across the state.
- Directed that TMA's concerns regarding generic drug substitution as contained in Resolution 27-81 be communicated to the Department of Public Health.

Third Quarter Meeting—July 12, 1981

The Board:

- Received a report from the Legislative Committee regarding legislation expected to come before the 92nd General Assembly.
- Received a report from the Communications and Public Service Committee regarding TMA-sponsored workshops for medical assistants.
- Received a report from the Rural Health Committee regarding the fall 1981 Rural Health Conference to be held in Crossville.
- Agreed to cosponsor with the Southern Medical Association a seminar for medical staff leaders in Nashville, Sept. 17-18.
- Directed that the Legislative Committee seek adoption of legislation in the Tennessee

- General Assembly to prohibit non-physicians to hold themselves out to be physicians.
- Received a report regarding the plans for implementation of Resolution 33-81.
- Directed the chairman to appoint a committee to study the feasibility of establishing a special statewide community program regarding clean air.
- Received an accounting of expenses incurred in the publication of the TMA fifty year history book.
- Endorsed Dr. William Hartmann for a position on the AMA Council on Medical Education Residency Review Committee.
- Endorsed Dr. David P. McCallie for the AMA's Benjamin Rush Award.
- Approved nominations to the State of Tennessee for positions on the Board of Physical Therapy Examiners, Air Pollution Control Board, Crippled Children's Advisory Committee, Medicaid Medical Care Advisory Committee, Board of Nursing, Perinatal Advisory Committee and Patient Qualification Review Board.
- Deferred action on a request from the Nashville Academy of Ophthalmology regarding radial keratotomy.
- Approved a recommendation from the Travel Committee that TMA sponsor a 10-day trip to Tahiti in February, 1982.
- Received a report from the Group Insurance Committee regarding improvements and premium reduction in the TMA-sponsored Group Life Program.
- Directed that staff develop language to be used by TMA in letters responding to requests for peer review services.
- Approved a motion to recommend changing the By-Laws regarding appointments and terms on the Nominating Committee.
- Approved the 1982 Annual Meeting to be held at the Hyatt Regency Hotel in Memphis; 1983 at Opryland Hotel in Nashville; 1984 at the Hyatt Regency Hotel in Knoxville.
- Directed staff to investigate the feasibility of conducting the 1985 Annual Meeting at the Peabody Hotel in Memphis.
- Received a report from the IMPACT Committee.
- Received a report from State Volunteer Mutual Insurance Company.
- Received a report regarding the TMA-sponsored project in prescribing improvements.

- Adopted a position that both community health clinics and private physicians be treated equally as to reimbursement for services rendered.

Fourth Quarter Meeting—October 4, 1981

The Board:

- Approved a request from the Committee on Emergency Medical Services that TMA sponsor three psychiatric emergency seminars in 1982.
- Received a report from the Committee on Governmental Medical Services and reaffirmed its position in support of maintaining the Medicaid Program within the Department of Public Health.
- Reaffirmed the Board's commitment to implement a radiological safety program.
- Approved a form letter to be used in responding to insurance company requests for peer review services.
- Heard from Dr. John Outlan regarding the establishment of a hospital ambulatory care facility in Collierville.
- Referred a resolution regarding hospital ambulatory care facilities to the TMA Ad Hoc Committee studying the matter.
- Directed that staff coordinate a meeting of the Executive Committee with the Executive Committee of the Tennessee Hospital Association.
- Approved TMA support of legislation to establish a cancer registry in Tennessee.
- Directed that staff respond to a letter from the Federal Trade Commission requesting certain minutes, files and transcripts of certain actions taken by the 1981 House of Delegates.
- Appointed directors to serve on the IMPACT Board for 1982.
- Approved the third quarter financial statement.
- Approved a proposed 1982 budget.
- Directed that information received from the Middle Tennessee Society of Pharmacists be placed in the *TMA Journal*.
- Approved an expenditure of \$12,000 to support the campaign of Dr. A. Roy Tyrer, Jr., for a position on the AMA Board of Trustees.
- Approved the expenditure of \$1,500 for speakers' expenses incurred in conducting three psychiatric emergency care seminars.
- Received a report regarding the state's task force to study hospital staff privileges.

- Received a report from the Impaired Physician Committee and directed that criteria be formed to establish a TMA-sponsored loan fund for impaired physicians.

Executive Committee Meeting—November 5, 1981

The Committee:

- Met with the Executive Committee of the Tennessee Hospital Association to discuss problems of mutual interest regarding nurse manpower, hospital utilization, ambulatory care centers and other matters.

First Quarter Meeting—January 9-10, 1982

The Board:

- Approved a request from the Committee on Legislation that Drs. Hobart H. Beale and James W. Gardner, Jr., be appointed to one-year terms on the Legislative Committee.
- Received a report from the Ad Hoc Committee on Ambulatory Care Facilities.
- Received a report from the Impaired Physician Committee regarding committee activities and plans to implement a loan program for impaired physicians.
- Received a report from the Governmental Medical Services Committee regarding proposed block grants.
- Received a report from the Communications and Public Service Committee regarding workshops for medical assistants that was attended by 619 persons.
- Received a report from the Medicine and Religion Committee regarding plans for the Annual Meeting breakfast sponsored by the Committee.
- Appointed members to serve on all special and standing committees of the Association.
- Appointed nine members of the House to serve as a Nominating Committee.
- Reappointed Drs. John H. Burkhardt and Charles E. Allen to serve on the TMA Student Education Fund Board of Directors.
- Referred the question of membership status of veteran members who fail to renew their state license to the Constitution and By-Laws Committee.
- Received a report regarding requests from the Federal Trade Commission for additional information regarding certain resolutions and

policies of the Association.

- Directed that resolutions adopted by the TMA House regarding the definition of physician supervision of ancillary personnel be forwarded to the Department of Public Health in response to a request for such policy.
- Received a report from the Group Insurance Committee that \$10,121 was being returned to members insured under the TMA-sponsored Worker's Compensation insurance program.
- Directed that the chairman write to the state Commissioner of Insurance regarding the requirement of mandatory second opinion required in some instances by the Prudential Insurance Company.
- Adopted proposed guidelines submitted by the Impaired Physician Committee to establish a loan program for impaired physicians.
- Urged members of the Board to submit names of physicians who would be willing to conduct peer review for the Medicaid program.
- Directed that letters be written to all members who have not paid the \$10 assessment as part of their 1982 dues.
- Nominated Dr. Thomas K. Ballard to the AMA to serve on the Accreditation Council for Continuing Medical Education.
- Nominated Dr. Howell P. Hoover for reappointment to the State Board for Licensing Health Care Facilities.
- Received a report from State Volunteer Mutual Insurance Company regarding a \$2.5-million dividend to be paid to policyholders.
- Voted to award Drs. Sam B. McFarland and Martha S. Bushore Distinguished Service Awards.
- Voted to award Mrs. Nancy Kerr, R.N., and Mr. Harold L. Montgomery Community Service Awards.
- Referred Resolutions 5-75 and 7-75 to the Judicial Council for review and possible reintroduction into the House of Delegates.
- Referred Resolution 18-75 to the Knoxville Academy of Medicine for consideration for reintroduction into the House of Delegates.
- Endorsed the CME programs to be presented by Southern Medical Association in Tennessee during 1982.
- Reappointed Charles L. Cornelius, Jr., as TMA legal counsel for 1982.
- Reappointed Mr. Ezra Jones, CPA, as TMA auditor and accountant for 1982.
- Approved the 1981 financial statement and operating report.

The Board of Trustees has expedited all House directives referred from the 1981 Annual Meeting. Details of all discussions and actions of the trustees are contained in the official minutes of the session, which are maintained at TMA headquarters and are available for review by any TMA member. A great deal of time and effort has been expended by members of the Board of Trustees on behalf of the Association during the past year. It has been a distinct privilege for me to have served as chairman for the past 12 months and I want to personally extend my thanks and appreciation to all members of the Board for their untiring efforts to represent the best interests of physicians and the patients they serve.

REFERENCE COMMITTEE C—*received the report of the Board of Trustees, thanked the Board for the time and effort they have expended during the past year in the performance of their important duties, and recommended that the report be filed.*

Report of the Secretary-Treasurer

GEORGE H. WOOD, M.D.

The annual audit for the fiscal and calendar year ending Dec. 31, 1981 has been completed and is available for review. The customary examination of Association records was made by Mr. Ezra Jones, certified public accountant, whose report contains a summary of accounting policies and pertinent notes to financial statements along with the financial statements and supporting schedules. The Association uses the fund accounting method by specific purposes on a modified cash basis. The net value of property has been reduced by recording depreciation on a straight-line basis and charged as an expenditure. No provision has been made for income tax on unrelated income that might be assessed by the Internal Revenue Service, nor has any provision been made for possible losses on notes receivable.

Condensed financial reports are appended hereto in order to show the assets, liabilities,

revenues, expenditures, and fund balances of the Association. Unexpectedly high interest rates, combined with an increase of 108 dues-paying members, produced total revenue greater than projected. You will note that the operating fund balance increased by about \$128,000 during the year. This maintains the fund, based upon 1982 projected expenditures, above the traditionally conservative level of 18 months.

I assure you that our Association remains financially sound and that its fiscal affairs are being managed responsibly.

TENNESSEE MEDICAL ASSOCIATION OPERATING FUND STATEMENT OF REVENUES, EXPENDITURES AND FUND BALANCE

	Year Ended December 31	
	1981	1980
REVENUES		
Dues TMA (net of 40,239.00 to Journal)	\$ 528,462.00	\$ 528,398.50
Annual Meeting—Exhibits	21,700.00	25,800.00
Annual Meeting—Tickets	6,651.00	10,900.00
Investment Income	223,801.44	176,925.45
AMA Fees for Dues		
Collection	9,172.35	4,251.84
Miscellaneous	477.04	4,035.84
History Orders	3,835.40	
TOTAL REVENUES	<u>794,099.23</u>	<u>750,311.63</u>
EXPENDITURES		
Administrative	349,655.65	331,212.53
AMA Delegates	15,566.65	10,708.39
Annual Meeting	34,770.79	34,296.04
Administrative Support & Services	34,826.46	23,444.28
Committee Expense	14,640.95	21,341.86
Headquarters Building	15,949.33	16,516.64
Legislative Expense	18,855.50	20,496.24
Other Organizations	9,405.00	9,530.00
Taxes	19,613.12	17,811.91
Travel—Staff	23,519.58	30,736.15
Contingencies	4,207.15	6,249.20
Miscellaneous	23,496.54	1,151.13
Capital Expenditures	62,767.96	2,185.59
Officers	18,991.20	19,676.21
TOTAL EXPENDITURES	<u>646,265.88</u>	<u>545,356.17</u>
Excess Revenues Over Expenditures	147,833.35	204,955.46
Excess Journal Costs	<u>20,133.12</u>	<u>33,798.24</u>
Net Income	127,700.23	171,157.22
FUND BALANCE		
Beginning	1,284,887.84	1,113,730.62
Ending	<u>\$1,412,588.07</u>	<u>\$1,284,887.84</u>

TENNESSEE MEDICAL ASSOCIATION FUND BALANCE SHEET

Year ended December 31
1981 1980

OPERATING FUND

ASSETS

Cash	\$ 93,135.57	\$ 131,166.74
Certificates of Deposit	1,600,000.00	1,400,000.00
Accrued Interest Receivable	73,166.79	34,226.58
Interfund Notes	104,200.00	89,200.00

TOTAL \$1,870,502.36 \$1,654,593.32

LIABILITIES

Accounts Payable	\$ 4,416.62	\$ 7,832.42
Accrued Payroll Taxes	208.71	480.56
Salary Escrow	13,786.96	—
	18,412.29	8,312.98

DEFERRED CREDITS

Advance Dues	439,502.00	361,392.50
--------------	------------	------------

FUND BALANCE 1,412,588.07 1,284,887.84

TOTAL \$1,870,502.36 \$1,654,593.32

PROPERTY FUND

ASSETS (at cost)

Land	\$ 64,803.09	\$ 64,803.09
Building	199,743.72	199,743.72
Equipment	98,981.74	45,800.03
Autos	16,075.79	14,022.29
	379,604.34	324,369.13

Less Accumulated Depreciation	90,446.26	77,117.27
-------------------------------	-----------	-----------

FUND BALANCE \$ 289,158.08 \$ 247,251.86

TENNESSEE MEDICAL ASSOCIATION JOURNAL INCOME AND EXPENSE Year Ended December 31, 1981

	Total	Readership	Advertising
INCOME			
Allocation of Dues	\$ 57,312.50	\$57,312.50	\$ —
Advertising	39,093.78	—	39,093.78
Subscriptions	2,057.88	2,057.88	—
	<u>98,464.16</u>	<u>59,370.38</u>	<u>39,093.78</u>
EXPENSES			
Printing and Distribution	76,611.28	47,626.89	28,984.39
Editor and Board	4,225.04	4,225.04	—
Clerical Assistance	600.00	600.00	—
Clipping Service	1,092.44	1,092.44	—
Salaries	14,950.08	7,475.04	7,475.04
Employee Insurance	688.60	344.30	344.30
Taxes	903.56	451.78	451.78
Supplies	4.00	4.00	—
Overhead	19,522.28	13,014.84	6,507.44
	<u>118,597.28</u>	<u>74,834.33</u>	<u>43,762.95</u>
EXCESS EXPENSES	<u>\$20,133.12</u>	<u>\$15,463.95</u>	<u>\$ 4,669.17</u>

REFERENCE COMMITTEE C—reviewed the report of the secretary treasurer, and recommended that the report be filed.

Report of the Judicial Council

NAT E. HYDER, JR., M.D., *Chairman*

The Judicial Council is pleased to report that the annual reports of the 49 component medical societies have been received and are in order. Filing of the annual reports by component medical societies is a requirement set forth in the Constitution and By-Laws. Failure to comply results in delegates being unable to be seated in the House of Delegates. Other action by the Judicial Council and/or the House of Delegates may also be taken if deemed necessary.

The Judicial Council held only one formal meeting this past year to consider Resolutions 5-75 and 7-75 for "Sunset Review." The Council heard a status report on the Federal Trade Commission's request for information on TMA past policies relative to corporate practice of medicine, separate billing by physicians, and principles of medical ethics. The Judicial Council over the past several years has been instrumental in the development and implementation of these policy areas.

Even though the Council this past year was relatively inactive as an entire group, many of the councilors did have ethical situations to arise in their districts. Without exception, working in concert with the local medical societies, each of the problem areas was resolved thus eliminating appeal to the entire Judicial Council of the TMA. The individual councilors and component societies are to be commended for the efficient manner in which they handled each of these individual situations.

I personally wish to thank the members of the Judicial Council and the component societies for their cooperation throughout this past year.

REFERENCE COMMITTEE C—received the report of the Judicial Council, extended its appreciation to members of the Council, and recommended that the report be filed.

Report of the Executive Director

MR. L. HADLEY WILLIAMS

Each year Tennessee Medical Association is confronted by new problems that seem to grow proportionately with public awareness and political attention directed to physicians and medical care. Each of these problems must be met and dealt with aggressively in addition to maintaining a positive and progressive stance with regard to ongoing issues. TMA's effectiveness in achieving positive solutions is certainly not complete but the organization provides one of the most affirmative mechanisms for dealing with those pressures and attitudes. When the leadership of the Association faces a specific problem, listens to all views on it and arrives at a consensus, the policymaking process is strengthened and with it, Tennessee Medical Association. Through this process, TMA has developed into a powerful segment of organized medicine.

Although the purpose of the Tennessee Medical Association has remained constant for more than 150 years, medicine's environment has changed radically. If we are to survive as a profession, we must continue our leadership in defining the direction of change. The new "federalism" concept of the current administration in Washington is not only a direct example but an almost immediate one that will require concerted medical association action. The block grant concept is being looked at from all levels of organized medicine. Maintaining a close liaison and input with state officials is a must, and will be accomplished.

Certain analysts believe that competition among physicians is increasing at present. A recent survey conducted by Market Opinion Research for AMA addressed this issue. Thirty-three percent of physician respondents felt that there are, at present, too many doctors in their community. Only 11% believe there are too few physicians. The remainder, 52%, indicate that the current number is about right. In contrast, only 10% of public respondents state there are too many doctors in their community, while 38% feel there are too few.

In terms of competition from new emerging forms of medical practice, physicians indicate substantially more growth in hospital outpatient services than any other organizational type, including HMOs or IPAs. This issue is of increasing importance to organized medicine and TMA.

A recent survey by the State Medical Society of Wisconsin revealed a series of issues that concern physicians in that state. Many, if not most, deserve the attention of TMA as well. These concerns include coping with the increasing intrusion of government into medicine by maintaining effective political action; preserving a pluralistic system of care; preserving the professionalism of practice; effectively dealing with governmental agencies and legislators; and effectively dealing with health planners and third party pay organizations.

In addition, other areas that will require our concern include helping to solve the problem of rising health care costs; educating physicians about cost containment; interpreting health care costs and causes to the public; educating consumers on cost-effective use of health care; and eliminating first dollar coverage. Without question, the intrusion into the practice of medicine by non-physicians and paraprofessionals will require added attention by TMA.

In the area of communications within the profession, emphasis will continue to be placed on informing members more effectively, increasing the involvement and voice of younger members, and decreasing the distance between the TMA leadership and grass roots.

Your executive staff is devoted to the concept of providing as many services as possible to the individual physician, the public and the state. Issues such as those outlined in this report will be deserving of the efforts of staff, officers and appropriate committees of TMA, in the months to come. I am convinced that TMA is, and will continue to be, a powerful force in addressing critical issues and representing the profession in Tennessee.

Membership in the Tennessee Medical Association surpassed the 5,000 mark in 1981. Annual growth has been steady and consistent for several years as the following summary will indicate. As a result, the administrative needs have increased but the additional costs have been offset by the increase in dues payers and the favorable investment market that has enabled all reserve funds to earn maximum return. Together, this income is being used to offset the annual rate of inflation affecting the cost of doing business and the increase in the annual budget required to provide additional services and benefits to the all-time high membership. If experience repeats itself, physicians and staff must look forward to another year when more meetings than ever be-

fore will have to be attended; more programs, more physicians traveling more miles involving more hours and days to hopefully accomplish more for the TMA membership.

TMA MEMBERSHIP REPORT
As of December 31, 1981

	1981	1980	1979	1978	1977
Dues Paying Active Members	4,519	4,419	4,306	4,217	4,004
Dues Paying Resident Members	73	65	80	68	45
Dues Exempt Members: Veteran Status . . . 350	490	427	387	354	317
Military, Disabled and Retired . . . 134					
Students 6					
TOTAL	5,082	4,911	4,773	4,571	4,336
Deaths	41	36	32	32	56

AMA Members from Tennessee Medical Association:

Active Dues Paying	3,477
Residents	64
Dues Exempt	474
Direct Members	280
TOTAL AMA MEMBERS	4,295

(79% of TMA members are also AMA members)

As chief administrative officer, the executive director is responsible to the Board of Trustees for the day-to-day operation of the headquarters and its executive and administrative staff. Reports to the House are repetitive of many other reports in past years. However, I shall again attempt to delineate some of the areas of importance to staff and the areas of administrative responsibility that require day-to-day attention:

- Membership administration and recruitment
- Liaison with county medical societies
- AMA delegation staffing at two annual conventions
- Cooperation with medical specialty societies
- Public service programs
- Publication of the *Journal*, TMA Newsletter, and other publications
- Liaison with allied professional associations
- Development of TMA legislative program
- Liaison with members of the Tennessee General Assembly
- Dues collection and records maintenance
- Coordination, planning, staffing of the Annual Meeting, House of Delegates, both regular and called meetings, plus other conferences, seminars, and meetings
- Liaison with governmental agencies

- Staffing for the Board of Trustees, officers, and all committees
- Maintaining headquarters building and property
- Budget development and investment of funds

I have attempted to outline some of the problems I perceive will confront this Association in the months ahead, as well as to report the overall condition of the Association and the methods the staff has utilized in carrying out its duties and responsibilities. It is not possible to neatly package the work of the year in a report and stamp it complete. TMA's business is one of continuing duration.

I am grateful for and commend to you the staff of TMA, who daily use the best of their abilities and talents in an effort to get the job done as the membership can rightfully expect. All of the staff are loyal and devoted to performing at a level expected of them.

Sincere appreciation is extended to the President, other officers, the Board of Trustees, committees and members of TMA for their help and cooperation with our staff.

REFERENCE COMMITTEE C—*received the report of the executive director, and expressed their appreciation for the full report dealing with present and anticipated problems and the manner in which these problems can be faced. The Committee thanked Mr. Williams for his leadership in conducting the day-to-day affairs of the Association, and recommended that the report be filed.*

Committee Reports

- The following standing and special committees made annual reports to the House of Delegates:
- Committee on Scientific Affairs
 - Committee on Legislation
 - Committee on Governmental Medical Services
 - Committee on TMA Group Insurance
 - Committee on Hospitals
 - Committee on Peer Review
 - Committee on Communications and Public Service
 - Committee on Continuing Medical Education
 - Mediation Committee
 - Committee on Rural Health
 - Committee on Emergency Medical Services
 - Advisory Committee to TMA Auxiliary
 - Committee on Medicine and Religion
 - Committee on Maternal and Child Care
 - Committee on Long-Term Health Care
 - Impaired Physician Committee
 - Committee on Health Planning
 - Primary Health Care Clinics Committee

1982 TMA Annual Meeting—House of Delegates Composition

First Session: April 14—Second Session: April 17

EX-OFFICIO MEMBERS OFFICERS

	First Session	Second Session
President	Allen S. Edmanson	Present
President Elect	George W. Halcamb, Jr.	Present
Vice President	Hays Mitchell	Present
Vice President	Charles E. Jordan	Present
Vice President	Howard W. Thomas	Present
Speaker	Charles E. Allen	Present
Vice Speaker	Malcolm R. Lewis	Present

BOARD OF TRUSTEES

	Present	Present
James C. Bradshaw, Jr.	Present	Present
James T. Galyan	Present	Present
C. Eugene Jabbour	Present	Present
James R. Royal	Present	Present
Clarence R. Sanders	Present	Present
John L. Sawyers	Present	Present
Charles W. White	Present	Present
George H. Wood	Present	Present
H. Trent Vandergriff	Present	Present

COUNCILORS

	Present	Present
First District	Nat E. Hyder, Jr.	Present
Second District	John R. Nelson, Jr.	Present
Third District	Paul E. Hawkins	Present
Fourth District	Thurman L. Pediga	Present
Fifth District	William M. Young	Present
Sixth District	Luther A. Beazley	Present
Seventh District	Kenneth J. Phelps, Sr.	Present
Eighth District	James T. Craig, Jr.	Present
Ninth District	Habert H. Beale	Present
Tenth District	Phillip H. Dirmeyer	Present

PAST PRESIDENTS

	Present	Present
John B. Darian	Present	Present
James W. Hays	Present	Present
George W. Zirkle, Jr.	Present	Present

AMA DELEGATES

	Present	Present
Thomas K. Ballard	Present	Present
David H. Turner	Present	Present
Hamel B. Eason	Present	Present
Charles B. Tharne	Present	Present
A. Ray Tyrer, Jr.	Present	Present

AMA JUDICIAL COUNCIL

	Present	Present
John H. Burkhart	Present	Present

COMMISSIONER OF PUBLIC HEALTH

	Present	Present
Eugene W. Fawinkle	Present	Present

DELEGATES

EAST TENNESSEE GRAND DIVISION

County Society		
BLOUNT	Marvin D. Peterson	Present
BRADLEY	John Ingram, III	Present
CAMPBELL	Harris Pierce	Present
CHATTANOOGA—	James W. Giles	Present
HAMILTON	Robert W. Myers	Present
	J. Edwin Strickland, Jr.	Present
	Pete S. Sateres	Present
	Robert C. Coddington	Present
	Theodore Feintuch	Present
	Billy J. Allen	Present
	Caleman L. Arnold	Present
	R. Phillip Burns	Present
	B. D. Harnsberger	Present
	Alfred P. Rogers	Present
COCKE	Michael Haad	Present
CUMBERLAND	Charles P. Bownds	Present
DeKALB	H. D. Cripps	Present
GREENE	Dee Metcalf	Present
	William Smead	Present
KNOXVILLE ACADEMY	Richard L. Habart, Jr.	Present
	Hugh C. Hyatt	Present
	Kenneth B. Rule	Present
	Fred A. Killeffer	Present
	Joe W. Black, Jr.	Present
	Martha S. Bushare	Present
	Mary B. Duffey	Present
	James J. Acker	Present
	James B. Bell	Present
	James C. Prase	Present
	Ted F. Haase	Present
	Richard L. Whittaker	Present
LAKEWAY	W. Robert Granewald	Present
	P. L. Fusan	Present
McMINN	Larry Hargis	Present
MONROE	James L. Allen	Present
ROANE-ANDERSON	E. C. Cunningham	Present
	Clary P. Faate	Present
	Dwight H. Willett	Present

County Society

		First Session	Second Session
SCOTT	Maxwell E. Hugg	Present	Present
SEVIER	Charles H. Bazeman, II	Present	Present
SULLIVAN-JOHNSON	E. Kent Carter	Present	Present
	Jack Butterworth	Present	Present
	Hal Stubbs	Present	Present
WASHINGTON—			
CARTER-UNICOI	Burgin E. Dasset	Present	Present
	Thomas Edwards	Present	Present
	Clarence E. Gaulding	Present	Present
	Gilbert A. Rannick	Present	Present

MIDDLE TENNESSEE GRAND DIVISION

		Present	Present
BEDFORD	John Derryberry	Present	Present
BENTON-HUMPHREYS	Subhi Ali	Present	Present
BUFFALO RIVER VALLEY	Parker D. Elrod	Present	Present
COFFEE	Charles H. Webb	Present	Present
DICKSON	Jeff S. Gardan	Present	Present
FENTRESS	Dilip N. Jashi	Present	Present
FRANKLIN	M. David Stacktan	Present	Present
GILES	Bufard P. Davis	Present	Present
JACKSON	L. F. Barden	Present	Present
LAWRENCE	Virgil Crowder, Jr.	Present	Present
LINCOLN	David R. McCauley	Present	Present
MACON	Charles C. Chitwood	Present	Present
MARSHALL	Kenneth J. Phelps, Jr.	Present	Present
MAURY	Charles Hudson	Present	Present
	Tam Duncan	Present	Present
MONTGOMERY	O. S. Lutan	Present	Present
	T. M. Cunningham	Present	Present
NASHVILLE ACADEMY	Edwin B. Anderson	Present	Present
	Robert W. Ikard	Present	Present
	John L. Farringer, Jr.	Present	Present
	H. Victor Braren	Present	Present
	Ronald E. Overfield	Present	Present
	Paul R. Stumb	Present	Present
	C. David Scheibert	Present	Present
	Sarah Sell	Present	Present
	Frank Boehm	Present	Present
	John B. Band	Present	Present
	Charles M. Gill	Present	Present
	John B. Thomisan	Present	Present
	C. Richard Treadway	Present	Present
	Ray W. Hester	Present	Present
	John K. Wright	Present	Present
	Jaanne L. Linn	Present	Present
	Robert C. Dunkerley, Jr.	Present	Present
	Thomas W. Orcutt	Present	Present
	Arville V. Wheeler	Present	Present
	Jack P. Pawell	Present	Present
OVERTON	W. G. Quarles	Present	Present
PUTNAM	Charles Jordan	Present	Present
ROBERTSON	John O'Dannell	Present	Present
RUTHERFORD	Charles Goodman	Present	Present
	Olin O. Williams	Present	Present
SMITH	Hugh E. Green	Present	Present
SUMNER	Lloyd Brown	Present	Present
WARREN	Harry E. Burck	Present	Present
WHITE	Charles Mitchell	Present	Present
WILLIAMSON	Joseph Willaughby	Present	Present
WILSON	J. C. Bradshaw, Jr.	Present	Present

WEST TENNESSEE GRAND DIVISION

		Present	Present
CONSOLIDATED	James Craig	Present	Present
	Oscar McCallum	Present	Present
	Lee Rush, Jr.	Present	Present
HENRY	Joe Mabley	Present	Present
MEMPHIS-SHELBY	Rex A. Amanette	Present	Present
	Jesse Woodall, Jr.	Present	Present
	Allen S. Boyd	Present	Present
	John S. Buchignani	Present	Present
	Dee J. Canale	Present	Present
	Fenwick Chappell	Present	Present
	F. Hammond Cole	Present	Present
	Thomas A. Currey	Present	Present
	Laren A. Crown	Present	Present
	James C. Hunt	Present	Present
	Robert D. Kirkpatrick	Present	Present
	W. David Dunavant	Present	Present
	Hugh Francis, Jr.	Present	Present
	Daniel C. Martin	Present	Present
	Albert J. Grabmyer, III	Present	Present
	Hallis H. Halford, Jr.	Present	Present
	Patrick J. Murphy	Present	Present
	George S. Lovejoy	Present	Present
	Phil E. Orpet, Jr.	Present	Present
	Evelyn B. Ogle	Present	Present
	John E. Outlan	Present	Present
	James W. Pate	Present	Present
	Phillip A. Pediga	Present	Present
	William T. Satterfield	Present	Present
	Daniel J. Scott, Jr.	Present	Present
	Rabin M. Stevensan	Present	Present
NORTHWEST	Arden Butler, Jr.	Present	Present
	William Share	Present	Present
TIPTON	J. Barret Matthews	Present	Present

The above information was taken from attendance record cards signed by the delegates.



1



2



3



4



5

**TENNESSEE MEDICAL ASSOCIATION
147TH ANNUAL MEETING
Memphis, Tennessee • April, 1982**



6



7



1) Outgoing TMA President Dr. Allen S. Edmonson, Memphis (right) relinquishing gavel to incoming President Dr. George W. Holcomb, Jr. 2) Outstanding Physician of the Year Award recipient Dr. Phil C. Schreier, Memphis (right) with Dr. Charles E. Allen, Speaker of the House of Delegates. 3) Community Service Award recipient Mrs. Nancy Kerr, R.N., Knoxville. 4) Community Service Award is presented to Harold Logan Montgomery, Jackson (left) by Dr. James C. Bradshaw, Jr., TMA Board Chairman. 5) Distinguished Service Award recipient Dr. Martha S. Bushore, Knoxville. 6) Distinguished Service Award recipient Dr. Sam B. McFarland, Lebanon. 7) Dr. and Mrs. George W. Holcomb, Jr., and Dr. and Mrs. Allen S. Edmonson. 8) U.S. Senator Steve Symms (R-Idaho), IMPACT luncheon speaker. 9) Outgoing TMA Auxiliary President Mrs. Luthur A. Beazley, Nashville (left) with incoming Auxiliary President Mrs. James Pate, Memphis. 10) Recipients of AMA-ERF checks from five of the six Tennessee medical institutions that received checks, with Mrs. John Bond, Nashville (right), AMA-ERF Auxiliary Committee chairman. 11) Governor Lamar Alexander (left) confers honorary citizenship to Dr. William Rial, AMA President-Elect. 12) Health Project Contest (left to right): Ted Frisby, teacher; Mrs. James G. Jarrell, teacher; Mrs. Thomas K. Creson, Auxiliary Health Project Contest chairman; and four student winners. 13) Dr. Anne Colston Wentz, Nashville, Medicine and Religion Breakfast speaker. 14) Dr. John H. Burkhardt, Knoxville, talks with Janice Hargis, Blue Cross/Blue Shield exhibitor.





PENINSULA PSYCHIATRIC HOSPITAL

Jones Bend Road

Louisville, Tennessee 37777

Peninsula Hospital is a 60-bed private psychiatric hospital, providing treatment for acute emotional disturbances, alcohol and drug abuse, with separate programs for adults and adolescents.

Peninsula is accredited by the Joint Commission on Accreditation of Hospitals and is a member of the American Hospital Association, Tennessee Hospital Association, and the National Association of Private Psychiatric Hospitals.

Treatment of Patients

The age range of patients is from teens to advanced age. Peninsula's program applies to all categories of nervous and mental disorders, including alcohol and drug abuse.

The program includes individual psychotherapy, large and small group therapy, as well as special groups for couples, adolescents, parents, families, alcoholics.

Activities

Recreational therapies include tennis courts, gymnasium, swimming pool, handball, paddleball, volleyball, softball, archery, jogging, fishing, horseshoes, shuffleboard, weight lifting, and mountain hiking.

Occupational therapies include crafts, music, sewing, needle art, library, and table games.

A high school educational program is conducted by an educational specialist and is coordinated with public school programs.

Admission Procedures

Patients have access to the full range of activities on the scenic 25 acre ground located on Fort Loudon Lake.

Patients may be admitted by telephone appointment upon referral of their doctor or may be self referred. It is desirable for the hospital to receive information from physicians and therapists who have previously treated the patient.

Patient Inquiries Welcome

615-573-7913

615-983-8216

Cyclapen®-W (cyclacillin)

Indications

Cyclacillin has less *in vitro* activity than other drugs in the ampicillin class and its use should be confined to these indications: Treatment of the following infections:

RESPIRATORY TRACT

Tonsillitis and pharyngitis caused by Group A beta-hemolytic streptococci
Bronchitis and pneumonia caused by *S. pneumoniae* (formerly *D. pneumoniae*)
Otitis media caused by *S. pneumoniae* (formerly *D. pneumoniae*), *H. influenzae*, and Group A beta-hemolytic streptococci
Acute exacerbation of chronic bronchitis caused by *H. influenzae**

*Though clinical improvement has been shown, bacteriologic cures cannot be expected in all patients with chronic respiratory disease due to *H. influenzae*.

SKIN AND SKIN STRUCTURES (integumentary) infections caused by Group A beta-hemolytic streptococci and staphylococci, non-penicillinase producers.

URINARY TRACT INFECTIONS caused by *E. coli* and *P. mirabilis*. (This drug should not be used in any *E. coli* and *P. mirabilis* infections other than urinary tract.)

NOTE: Perform cultures and susceptibility tests initially and during treatment to monitor effectiveness of therapy and susceptibility of bacteria. Therapy may be instituted prior to results of sensitivity testing.

Contraindications Contraindicated in individuals with history of an allergic reaction to penicillins.

Warnings Cyclacillin should only be prescribed for the indications listed herein.

Cyclacillin has less *in vitro* activity than other drugs of the ampicillin class. However, clinical trials demonstrated it is efficacious for recommended indications.

Serious and occasional fatal hypersensitivity (anaphylactoid) reactions have been reported in patients on penicillin. Although anaphylaxis is more frequent following parenteral use, it has occurred in patients on oral penicillins. These reactions are more apt to occur in individuals with history of sensitivity to multiple allergens. There are reports of patients with history of penicillin hypersensitivity reactions who experienced severe hypersensitivity reactions when treated with a cephalosporin. Before penicillin therapy, carefully inquire about previous hypersensitivity reactions to penicillins, cephalosporins and other allergens. If allergic reaction occurs, discontinue drug and initiate appropriate therapy. Serious anaphylactoid reactions require immediate emergency treatment with epinephrine. Oxygen, I.V. steroids, airway management, including intubation, should also be administered as indicated.

Precautions Prolonged use of antibiotics may promote overgrowth of nonsusceptible organisms. If superinfection occurs, take appropriate measures.

PREGNANCY: Pregnancy Category B. Reproduction studies performed in mice and rats at doses up to 10 times the human dose revealed no evidence of impaired fertility or harm to the fetus due to cyclacillin. There are, however, no adequate and well-controlled studies in pregnant women. Because animal reproduction studies are not always predictive of human response, use this drug during pregnancy only if clearly needed.

NURSING MOTHERS: It is not known whether this drug is excreted in human milk. Because many drugs are, exercise caution when cyclacillin is given to a nursing woman.

Adverse Reactions Oral cyclacillin is generally well tolerated. As with other penicillins, untoward sensitivity reactions are likely, particularly in those who previously demonstrated penicillin hypersensitivity or with history of allergy, asthma, hay fever, or urticaria. Adverse reactions reported with cyclacillin: diarrhea (in approximately 1 out of 20 patients treated), nausea and vomiting (in approximately 1 in 50), and skin rash (in approximately 1 in 60). Isolated instances of headache, dizziness, abdominal pain, vaginitis, and urticaria have been reported. (See WARNINGS) Other less frequent adverse reactions which may occur and are reported with other penicillins are anemia, thrombocytopenia, thrombocytopenic purpura, leukopenia, neutropenia and eosinophilia. These reactions are usually reversible on discontinuation of therapy.

As with other semisynthetic penicillins, SGOT elevations have been reported.

As with antibiotic therapy generally, continue treatment at least 48 to 72 hours after patient becomes asymptomatic or until bacterial eradication is evidenced. In Group A beta-hemolytic streptococcal infections, at least 10 days' treatment is recommended to guard against risk of rheumatic fever or glomerulonephritis. In chronic urinary tract infection, frequent bacteriologic and clinical appraisal is necessary during therapy and possibly for several months after. Persistent infection may require treatment for several weeks.

Cyclacillin is not indicated in children under 2 months of age.

Patients with Renal Failure Cyclacillin may be safely administered to patients with reduced renal function. Due to prolonged serum half-life, patients with various degrees of renal impairment may require change in dosage level (see DOSAGE AND ADMINISTRATION in package insert).

Dosage (Give in equally spaced doses)

INFECTION	ADULTS	CHILDREN*
Respiratory Tract		
Tonsillitis & Pharyngitis	250 mg q.i.d.	body weight < 20 kg (44 lbs) 125 mg t.i.d. body weight > 20 kg (44 lbs) 250 mg t.i.d.
Bronchitis and Pneumonia		
Mild or Moderate Infections	250 mg q.i.d.	50 mg/kg/day q.i.d.
Chronic Infections	500 mg q.i.d.	100 mg/kg/day q.i.d.
Otitis Media	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day t.i.d.†
Skin & Skin Structures	250 mg to 500 mg q.i.d.†	50 to 100 mg/kg/day†
Urinary Tract	500 mg q.i.d.	100 mg/kg/day

*Dosage should not result in a dose higher than that for adults.

†depending on severity

How Supplied Tablets 250 mg and 500 mg in bottles of 100. Oral Suspension 125 mg and 250 mg per 5 ml in bottles to make 100 ml and 200 ml of Suspension.

Wyeth Laboratories
Philadelphia, Pa. 19101

Compared to amoxicillin

Faster peak. Fewer problems.

... in infants and children

Cyclapen®-W (cyclacillin) produces twice the peak serum concentration* (15.6 mcg/ml versus 7.3 mcg/ml) in half the time (30 minutes versus 60 minutes).¹

Cyclapen®-W is just as effective in otitis media and streptococcal tonsillopharyngitis†.²

Cyclapen®-W produces a significantly lower incidence of the most common side effect, diarrhea.²

CYCLAPEN®-W

(cyclacillin) Tablets/Suspension

Rapid onset of action with fewer side effects.

New t.i.d.
dosage for
otitis media†
and strep
pharyngitis†
in children

*Rapidly excreted unchanged in urine.
Clinical efficacy may not always correlate with blood levels.

†Due to susceptible organisms.

1. Ginsburg CM, McCracken GH Jr, Zweighaft TC, Clahsen JC: Comparative pharmacokinetics of cyclacillin and amoxicillin in infants and children. *Antimicrob Ag Chemother* 19:1086-1088 (June) 1981.

2. Multicenter trials. Data to be published.

Copyright © 1982, Wyeth Laboratories.
All rights reserved.

See important information on adjoining column.

Wyeth Laboratories
Philadelphia, Pa 19101

Coalitions for Health Care

For more than three years the American Medical Association has worked diligently to establish contacts at the national and local level between physicians and other health care providers and business and industry groups for the purpose of discussing common concerns related to the delivery of health care. Early in this program, the Association's representatives met with representatives of more than 100 of the nation's leading industrial concerns, and over the last 18 months has concentrated on assisting with and encouraging these same types of discussions at the local level.

As an extension of this activity, the American Medical Association has been holding discussions with the American Hospital Association, the Blue Cross/Blue Shield Association, the Business Roundtable, the Health Insurance Association of America, and the American Federation of Labor and Congress of Industrial Organizations with a view toward marshaling their support behind this coalition activity.

Background

The country is in a period of review and reassessment of private and public policies relating to the costs, planning and delivery of health care.

Health care expenditures have taken an increasingly larger share of the nation's gross national product. While many efforts have been made to restrain rising costs, the problem persists and is of great concern to all health care purchasers (both governmental and private), consumers, and providers. All must share in the responsibility for seeking solutions.

The federal government, as a matter of policy, is calling on the states and localities and on the private sector for increased responsibility for health care insurance and services. The states, localities, and the private sector are in the process of redefining their roles in financing and providing personal health services. In this setting and out of these concerns in the past several years, there has grown up a variety of voluntary coalitions of hospitals, doctors, insurers, business, labor, and other groups, public and private, in different combinations and participations.

As representatives of national organizations, we have been reviewing the experience of these local and state coalitions in their diverse forms and activities. Only a relatively few of the more than 70 coalitions of which we have records and reports seem to have advanced beyond the important stage of discourse and exchanging views to the operation of specific programs or projects of cooperative activities. With health care costs rising more rapidly in the recent period and with the prospect of a diminished role, the need for organizing new coalitions and improving the effectiveness of existing coalitions is vital.

This is AMA Board of Trustees Report VV, submitted to the House of Delegates at its Interim Meeting in December, 1981.

We are agreed upon the following conclusions and support the following programs.

Formation of Coalitions

1. We endorse, in this period, the potentials of voluntary coalitions on a local, state, or regional basis. We encourage our members or local affiliates to participate together in such coalitions, recognizing that at the outset local conditions and relationships may appropriately result in different configurations, patterns of membership, and programs. But, in due course, for effective results, all concerned groups need to be included. An individual organization is unlikely to have the same impact if acting alone.

2. We view the most appropriate focus of local coalitions generally to be the costs of delivery of medical care, and the numerous factors which locally influence such costs, with related attention to the quality of care, to the availability of proper medical care and access to such care by various groups within the population.

3. Experience shows that, after an initial period of dialogue and getting acquainted, a local coalition is likely to accomplish more with a limited agenda of a very few priority projects. Appropriate staff resources drawn from or financed by coalition members are essential to help collect information, define priorities, and implement action decisions.

Analysis of Local Health Systems

Local coalitions may find it helpful early to make an inventory or survey of local resources and problems, if that has not already been done. Data for this first level of assessment should be largely available, or can be developed from existing sources. Key areas of analytical concern include the following:

1. The rate of increase in total health care costs, the rate of increase in particular costs (hospitals, physicians, etc.) and the reasons for these increases.

2. Utilization of acute inpatient hospital days of care in the area, how the rate compares with other areas, the utilization rates of different population groups, and the steps which can be taken to reduce high utilization where excessive patterns are indentified. A similar approach can be taken in regard to utilization rates of other health care services, e.g., long-term care, physician visits, laboratory and x-ray services, psychiatric care. The effectiveness of existing utilization review systems should be assessed.

3. Existing health care facilities and services in the community, with an assessment of the availability of needed services, especially for the disadvantaged and unemployed. Excess capacity should also be assessed.

4. Analysis of health benefits packages and options (e.g., HMOs and other alternative delivery systems), as well as gaps in coverage of services.

Potential Actions

Following the analysis of the local health care system the coalition's next step is to decide on a few priority projects. These projects could take the form of either a demonstration to gain experience, establish relationships and test policies or a communitywide action. Among projects with a demonstrated potential for improving cost and delivery of health care are:

1. Encourage efforts to place less emphasis on expensive inpatient technology and greater emphasis on alternative forms of care, including ambulatory and home care. Among the activities which may accomplish this objective are (a) Redesign insurance benefits to emphasize preventive, primary and home care. (b) Case management and utilization review with both health care and financial protection for patients. (c) Encourage efforts to modify use of hospital beds, with protection of patients, workers and trustees, to make the most appropriate use of community resources.

2. Increase access to care: (a) Efforts to finance and provide health care for the unemployed and others who do not have access to care. (b) Efforts to mitigate the impact of federal (and state and local)

budget changes on health care in the community.

3. Increase opportunities to discuss and develop the most cost effective and equitable forms of provider payment.

4. Develop more effective programs of health promotion and disease prevention at the workplace.

We intend to issue and distribute this statement to our constituent bodies or members. We further intend to follow the developments in local coalitions for health care and to provide appropriate reports and assistance.

Editor's Note: This statement has now been agreed to in principle by representatives of all of the organizations listed, including the AMA House of Delegates, which adopted the following recommendation: "That the AMA strongly support health care coalitions that include meaningful physician participation, so that primary emphasis is given to quality medical care, including availability and access, as well as recognizing the importance of cost effectiveness and cost containment."

Physician and Public Education on the Medical Consequences of Thermonuclear Warfare

Board of Trustees Report P (A-81), referred to the Board, states that physicians should be educated on the medical consequences of nuclear war and recommends that the AMA cooperate with the appropriate government agencies to develop a program for voluntary physician education and involvement in preparation for dealing with medical and health problems that would follow a nuclear attack. Report P was submitted in response to Resolution 3 and a suggested amendment (I-80), referred to the Board.

Physicians, like citizens globally, abhor war. They are especially concerned about the medical consequences of a thermonuclear war. Available data reveal that there is no adequate medical response to a nuclear holocaust. In targeted areas, millions would perish outright including medical and health care personnel. Additional millions would suffer severe injury, including massive burns and exposure to toxic levels of radiation without benefit of even minimal medical care. Medical and hospital facilities and other resources would likewise have been destroyed.

It is in a spirit of concern that the AMA Board of Trustees believes that it is incumbent upon the Association to inform the President and the Congress of the United States of the medical consequences of nuclear war and that no adequate medical response is possible.

Finally, it has come to the attention of the Board that some medical institutions have rejected the Defense Department's request to participate in a plan to allocate a specific number of beds for use of a future large-scale (nuclear or non-nuclear) war overseas. The institutions apparently believe that participation shows approval for the planning of a nuclear war. The Board believes that these rejections are misguided and would seriously erode an ancient responsibility of the medical profession. Patients must be treated, regardless of how they are injured, and planning for treatment is an important part of good medicine.

The Board of Trustees recommends that the AMA (1) inform the President and the Congress of the medical consequences of nuclear war so that policy decisions can be made with adequate factual information; (2) prepare appropriate informational materials to educate the physician population and the public on the medical consequences of nuclear war; (3) and other health care organizations cooperate with the responsible authorities in dealing with those matters having to do with health and medical care in the event of national emergencies, including those associated with military hostility; (4) not become involved in political issues outside its professional expertise such as national defense and the politics of nuclear war preparedness inasmuch as it is not appropriate for the AMA to do so.

Editor's Note: This report was adopted in lieu of Resolution 3 and the suggested amendment (I-80).

This is AMA Board of Trustees Report DD, submitted to the House of Delegates at its Interim Meeting in December, 1981. Past House Action: A-81:65-66; I-80:222.

Candidates for nutritional therapy..

10,000,000

alcoholics. Ethanol may produce many effects that together bring about nutritional deficiencies, so that alcoholism affects nutrition at many levels.¹

25,500,000 geriatric

patients. The older patient may have some disorder or socioeconomic problem that can undermine good nutrition.²

23,500,000 surgical

patients. Nutritional status can be compromised by the trauma of surgery; and some operations interfere with the ingestion, digestion and absorption of food.³



Before prescribing, please consult complete product information, a summary of which follows:

Each Berocca® Plus tablet contains 5000 IU vitamin A (as vitamin A acetate), 30 IU vitamin E (as *dl*-alpha tocopheryl acetate), 500 mg vitamin C (ascorbic acid), 20 mg vitamin B₁ (as thiamine mononitrate), 20 mg vitamin B₂ (riboflavin), 100 mg niacin (as niacinamide), 25 mg vitamin B₆ (as pyridoxine HCl), 0.15 mg biotin, 25 mg pantothenic acid (as calcium pantothenate), 0.8 mg folic acid, 50 mcg vitamin B₁₂ (cyanocobalamin), 27 mg iron (as ferrous fumarate), 0.1 mg chromium (as chromium nitrate), 50 mg magnesium (as magnesium oxide), 5 mg manganese (as manganese dioxide), 3 mg copper (as cupric oxide), 22.5 mg zinc (as zinc oxide).

Indications: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.

Contraindications: Hypersensitivity to any component.

Warnings: Not for pernicious anemia or other megaloblastic anemias where vitamin B₁₂ is deficient. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with vitamin B₁₂ deficiency who receive supplemental folic acid and who are inade-

quately treated with B₁₂.

Precautions: General: Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. *Information for the Patient:* Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. *Drug and Treatment Interactions:* As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.

Adverse Reactions: Adverse reactions have been reported with specific vitamins and

Why the TMA Annual Meeting?



GEORGE W. HOLCOMB, JR.

From time to time some members have questioned the benefits of the Tennessee Medical Association Annual Meeting. We all have numerous medical commitments that consume our time and sap our energy, as well as other activities we would like to pursue. Why then do we set aside time for the TMA Annual Meeting?

While in Memphis attending the most recent session, the answer to these questions became clear as I met and exchanged ideas with physicians from all corners of the state, heard the House of Delegates discuss and deliberate current issues which directly affect the way each of us practices medicine, attended the scientific sessions, viewed the technical exhibits and listened with admiration to the reports of the Auxiliary.

I marveled at the ability of the 189 members of the House of Delegates to arrive at a consensus in a democratic manner when such diverse views were stated during deliberation of some of the resolutions. Among the debated issues were the guidelines for prescription writing for or dispensing of legend drugs by non-physicians, opposition to freestanding emergency facilities, and opposition to subsidization by a hospital corporation in the private practice of medicine. Also, it was strongly affirmed that the TMA urge the State Board of Medical Examiners to increase efforts to investigate and discipline any unethical prescribing or dispensing of controlled substances. One of the hottest debates involved clean air with the nonsmokers establishing a ban on smoking at future TMA scientific and business meetings. It was the majority opinion that physicians should set an example in the establishment of better health habits. Certainly, these issues are of paramount interest to all of us; more importantly, some of the decisions made will affect directly each practicing physician in Tennessee in future years. It is well to remember that these delegates are elected by, and bring ideas from, local medical societies in rural, middle sized and the urban communities of our state. The number of delegates from each county society is proportional to the membership, and the decisions of this body should be representative of the opinion of the entire Association.

Sometimes we overlook the importance and the high quality of the scientific sessions, which run concurrently with the other activities. At the 23 specialty society meetings, outstanding nationally known speakers presented recent medical advances which stimulated lively discussions of current and even controversial topics. The exchange of experiences and the interchange of ideas with our colleagues cannot help but benefit our patients.

The quality of life is richer in each community of this state because of the work done by our Auxiliary members. This group experienced a year of "joyful commitment"—a year of commitment of service to their own community and to the state, to medicine and to us, their husbands. The more than 2,000 members have been actively and creatively involved in the child restraint program, alcohol and drug abuse, child abuse, health projects and health fairs, and they played a most vital role in legislative matters. The Auxiliary raised over \$70,000 in a variety of ways last year for the AMA-ERF. What other group could provide such dedicated leadership, perseverance and concern in health-related projects?

The annual TMA meeting is truly a renewing experience. It is the *one* place where physicians in family practice, all specialties, those in government medicine and medical educators come together to establish standards for patient protection, to promote improvement in health care, to increase knowledge and to have a good time. Yes, the Annual Meeting does serve a very useful purpose in the lives of TMA members and their families.

Make plans now to come to Nashville in April of 1983.

George Holcomb Jr MD

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage,
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson

GEORGE W. SHANNON, M.D., Jackson

CLAUDE H. CROCKETT, JR., M.D., Bristol

H. VERDAIN BARNES, M.D., Chattanooga

FRANCIS W. GLUCK, JR., M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

JUNE, 1982

editorials

Fancies and Fantasies: The House, Vintage 1982

The rain began on Thursday evening, shortly after my wife and I and some friends and colleagues returned to the hotel from satisfying ourselves that Justine's continues to be a superb place for practicing gluttony. By mid-morning

Friday enough water had fallen to bury some areas of Memphis along the Mississippi border waist deep, frustrating attempts of the ladies to board a bus bound for the auxiliary party at the refurbished Peabody Hotel, and leaving soggy bottoms in azalea-bedecked Audubon Park as late as Saturday. It likely was the tears of selected members of the TMA House of Delegates.

The agenda of the House was the lightest I have seen in the decade I have been attending sessions of the TMA House, due in part at least to the absence of that perennial generator of resolutions, our late departed colleague Tom Dorrity, may he rest in peace. Given the choice, I would prefer to have the sessions a little longer, as I missed Tom's sometimes protracted but never dull harangues. We are not given the choice, however, and until late Saturday morning deliberations proceeded apace; you can read about that elsewhere in this issue. But then came the "clean air" resolution.

The Clean Air resolution—not, I might interject here, a necessarily original one—would encourage legislative bodies to prohibit the smoking of tobacco in public places, which the resolution listed, and which amendments by the reference committee abridged considerably. One of our more diminutive colleagues candidly observed that as his father smoked a lot, he never grew much, and it seemed hypocritical to him, and destroyed the credibility of the House, to attempt to restrict smoking in public places while continuing to pollute its own air with billowing clouds of tobacco smoke. His logic persuaded his colleagues—his coughing, bleary-eyed, smoke-struck colleagues—of the error of the ways of some of us, and with the resolution an amendment was passed that would prohibit smoking in all scientific and official gatherings of TMA, thus belatedly bringing policy of the TMA House into line with that of the AMA. It was not passed though until our smoking colleagues had exhausted every avenue of parliamentary maneuvering.

My pipe-smoking neighbor vowed in response to return next year with a well-drawn resolution to prohibit drinking. Without either defending or condemning either the drinking of alcohol or the smoking of tobacco, I wish to examine here the similarities and dissimilarities of these two customs, their sequelae, and their prohibition.

First some definitions. Every animal is a drinker, else he would die, and so for a body to

allow, "I am not a drinker" is not only sanctimonious but untrue. Nevertheless, since somehow or other the term "drinking" has come to be equated with the imbibing of alcoholic beverages, I will let that pass, and accept the narrower construction of the term for the purposes of this editorial. Smoking, on the other hand, is something no animal does naturally. Neither do they drink alcohol, though birds have been known to become intoxicated on fermented berries.

Now that we all understand each other, what are the similarities of "smoking" and "drinking"? First, each implies the introduction into the body of a harmful substance (or harmful substances). The users of tobacco and alcohol themselves concede as much, even though the nature and extent of the harm may come into question. Although the moderate use of alcohol is said to promote good health, perfect preventive medicine would doubtless interdict the ingestion of both (along with chocolate, purified sugar possibly, and many food additives certainly, not to mention excessive sodium chloride and a host of other things that make living worthwhile and break its tedium). Aside from apprising the user of the potential harm of these substances, however, efforts at interdicting their use generally come to naught, as most people prefer the happier (fuller?) even if shorter life. As a victim of Dr. Ancel Keyes' fruit and rice (no salt) diet once observed, you don't really live longer—it just seems longer. So, with the observation that neither alcohol nor tobacco is, for various reasons, good for one, we will here abandon attempts to prohibit the use of either simply for its harm to the user. It is not sufficient reason for interdicting their use in public places, including the TMA House.

Drinking in public places (or in private places, either, for that matter) does harm to others only in specifically and rather narrowly defined circumstances, including public drunkenness, which has long been grounds for incarceration and prosecution. Damage to the unborn child by both tobacco smoke (including that of others) and alcohol has lately been receiving attention, and one state after another has enacted legislation to protect the public from the drinking driver. With those exceptions, alcohol harms only its drinker, and it is futile to attempt to protect every individual from everything he can do to himself.

On the other hand, it has been amply documented that tobacco smoke exhaled by the

smoker does the same damage to the nonsmoker when he inhales it secondhand as it has already done to the smoker. In addition to possible carcinogenic effects, the smoker's neighbor suffers in the same way as the smoker, and if he is sensitive to the various products, to a greater extent, from the effects of carbon monoxide, nicotine, and various allergens generated by the burning tobacco. Unlike the unintoxicated drinker, every smoker is poisoning every one of his neighbors in an enclosed space.

It seems obvious, then, that the effects of a resolution to eliminate drinking would bear only passing resemblance to those of the current one, particularly since the drinking of alcohol in the scientific sessions and official gatherings of the Tennessee Medical Association is already considered bad form, and is seldom if ever practiced. A resolution to prohibit the drinking of coffee, which some say is also dangerous, might be more appropriate. It certainly would keep the delegates from wandering in and out so much.

J.B.T.

Keep Fingers Flaccid for Placid Passage

There is a Reaper whose name is Death,
And with his sickle keen
He reaps the bearded grain at a breath
And the flowers that grow between.

—Henry Wadsworth Longfellow
The Reaper and the Flowers

According to the deliberately fostered and carefully nurtured public image of the late Jack Benny, the vault with the creaking door held tightly the comedian's accumulated wealth. Rochester, Jack's durable valet, allowed as how if anyone could find a way to take it all, or any part of it, with him, it would be Mr. Benny. There is no record he did.

On graduating from college, a group of classmates of one of my daughters went on a lark to Europe. It was the last fling for one of them, a bright, lovely young lady standing on the threshold of a career in nursing. In a carefree moment she stepped from the curbing of a street in Vienna and was struck down by a passing truck. As hers was a most unusual first name, when now and again I come across it, usually

spelt somewhat differently, I am washed momentarily by a wave of sadness. "Where are all the flowers gone? Gone to graveyards, every one." Not every one, but that one. Any one is too many.

"'My Lord hath need of these flowerets gay,' /The Reaper said, and smiled./ Dear tokens of the earth are they/ Where He was once a child." We think they are ours, they and all the people and things we cherish. We cling to them and to our own life so tightly. We hold them oh, so close. We forget they are only lent us. Job, as he finally lost everything, observed, "Naked came I out of my mother's womb, and naked shall I return thither."

The medical history of Job is an astonishing and agonizing one, but through it all his mental health remained intact. Augustine prayed for the courage to change the things he could change, the grace to accept the things he could not change, and the wisdom to know the difference. One of the things we cannot change is the slipping from our grasp of all we hold dear. It is much less painful to let them slip out than to have them torn away, but either way, they will all go.

A firm grip is fine for shaking hands or holding a sword, but for peace of mind, keep your fingers limp and your grip loose. Then when things fall apart, perhaps you can say with Job, "The Lord giveth and the Lord taketh away. Blessed be the name of the Lord," instead of following the devil's advice to curse God and die.

J.B.T.



William Edward Allison, age 61. Died April 3, 1982. Graduate of University of Tennessee College of Medicine. Member of Nashville Academy of Medicine.

Roland James Brett, age 58. Died April 13, 1982. Graduate of University of Tennessee College of Medicine. Member of Knoxville Academy of Medicine.

Albert Nolen Streeter, age 76. Died February 19, 1982. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Richard C. Dickson, M.D., Chattanooga
Cary G. Hodnett, M.D., Chattanooga
Edward Downey Johnson, M.D., Sale Creek
Allen M. Mitchell, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

John Michael Epps, M.D., Jackson
William Robert Routon, M.D., Humboldt

KNOXVILLE ACADEMY OF MEDICINE

Donald T. Ellenburg, M.D., Knoxville
Robert M. Groves, M.D., Knoxville
Thomas H. Hetrick, M.D., Knoxville

LAKEWAY MEDICAL SOCIETY

Alex J. Chronis, M.D., Morristown

McMINN COUNTY MEDICAL SOCIETY

Stephen L. Denton, M.D., Englewood

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Helen G. Beeman, M.D., Memphis
Morris Leonard Gavant, M.D., Memphis
Larry I. Giltman, M.D., Memphis
Melvin Lester Goldin, M.D., Memphis
Charles S. Hertz, Jr., M.D., Memphis
Robert A. Humphreys, M.D., Memphis
Jennifer S. Knowles, M.D., Memphis
Samuel G. McNeely, Jr., M.D., Memphis
Joseph S. Moak, Jr., M.D., Memphis
Manoj Narayanan, M.D., Memphis
Donald A. Taylor, M.D., Memphis
Robert J. Trautman, M.D., Memphis
Audrey Whaley Tuberville, M.D., Memphis
Manuel Vider, M.D., Memphis

(Student Members)

James H. Acuff, Memphis
Keith G. Anderson, Memphis
Bettina H. Ault, Memphis
Carolyn L. Baker, Memphis
Thomas K. Ballard, Memphis
Joseph D. Barker, Memphis
Arden D. Barnett, Jr., Memphis
David M. Barron, Memphis
Thomas C. Bell, Memphis
Mary C. Boggs, Memphis
Alan D. Boom, Memphis
Maria T. Brooks, Memphis
Richard G. Brunner, Memphis

Thomas H. Callaway, Memphis
 Jimmy R. Clark, Memphis
 Cynthia Anne Cofer, Memphis
 William G. Cook, Memphis
 James W. Cox, Memphis
 Carol S. Craig, Memphis
 Donald A. Crawford, II, Memphis
 Andrew H. Crenshaw, Jr., Memphis
 Cindy T. Dedmon, Memphis
 Joseph M. Dement, Memphis
 Jane H. Demos, Memphis
 Thomas W. Doty, III, Memphis
 William M. Fesmire, Memphis
 Walter H. Folger, Memphis
 Phillip D. Forsythe, Memphis
 Linda L. Gant, Memphis
 Timothy G. Gillespie, Memphis
 Timothy E. Gordon, Memphis
 Robert W. Greene, Jr., Memphis
 Johnnie C. Hall, Memphis
 Randy L. Hamill, Memphis
 John E. Hamilton, Memphis
 John J. Harris, Jr., Memphis
 Paula P. Harris, Memphis
 Timothy W. Hayden, Memphis
 Wayland J. Hayes, Memphis
 Terri L. Hodges, Memphis
 H. Rhea Holly, Memphis
 Stephen W. Jackson, Memphis
 Martin B. Jenkins, Memphis
 Susan E. Jennings, Memphis
 Douglas E. Jones, Memphis
 Michael B. Kennedy, Memphis
 Roger S. LaBonte, Millington
 Mike E. Lemonds, Memphis
 Jerry F. London, Memphis
 Robert E. McDonald, Jr., Memphis
 Patsy R. Manning, Memphis
 James H. Marshall, Memphis
 James K. Massengill, Memphis
 James M. Millis, Memphis
 Nancy A. Mitchell, Memphis
 John T. Murphy, Jr., Memphis
 Robert E. Nichols, Memphis
 Scott E. Owens, Memphis
 Paul W. Pitts, Memphis
 Frances E. Pritchard, Memphis
 Bayard P. Quinn, Memphis
 Daniel J. Scott, III, Memphis
 James L. Seals, Memphis
 Linda M. Smiley, Memphis
 Rickey A. Smith, Memphis
 Thomas G. Stovall, Memphis
 Oswald H. Thomas, III, Memphis
 Betty J. Vanhooser, Memphis
 Janice M. Vinson, Memphis
 Robert W. Wake, Memphis
 Joseph A. Wieck, Memphis
 Lane P. Williams, Memphis
 Raymond E. Wilson, Memphis
 Merrill S. Wise, Memphis
 Clara R. Womack, Memphis
 Terry L. Wright, Memphis
 John G. Yager, Memphis
 Paula S. Zarbock, Memphis

NASHVILLE ACADEMY OF MEDICINE

Clark R. Gregg, M.D., Nashville
 A. Clyde Heflin, M.D., Nashville
 John W. Interlandi, M.D., Hermitage
 John Hugh Nadeau, M.D., Nashville
 Betty K. Neff, M.D., Nashville
 Hugh C. Pribor, M.D., Nashville
 Mitchell Keith Schwaber, M.D., Nashville
 Peter G. Smith, M.D., Nashville
 S. Steve Snow, M.D., Nashville
 Marietta Sunga-Guevara, M.D., Madison
 George Waterhouse, M.D., Nashville
 Anne Colston Wentz, M.D., Nashville

(Student Member)

Thomas F. Phelps, Nashville

NORTHWEST TENNESSEE ACADEMY OF MEDICINE

J. Louis Manning, M.D., Dresden

ROBERTSON COUNTY MEDICAL SOCIETY

John W. O'Donnell, III, M.D., Springfield
 Robert A. Shearer, M.D., Springfield

SEVIER COUNTY MEDICAL SOCIETY

Charles H. Bozeman, II, M.D., Sevierville

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

J. Lawrence Jayne, Jr., M.D., Bristol
 Ronald S. Smith, M.D., Kingsport

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL SOCIETY

Floyd B. Goffin, M.D., Johnson City
 L. Collier Jordan, Jr., M.D., Johnson City

WILSON COUNTY MEDICAL SOCIETY

Nii Sabin Quao, M.D., Lebanon

personal news

William H. Armes, Jr., M.D., Rossville, has been selected as the 1982 Rural Health Practitioner of the United States by the National Rural Primary Care Association.

Terry L. Myers, M.D., Johnson City, is among the first specialists in human genetics to be certified by the newly constituted American Board of Medical Genetics.

TMA Members Receive AMA Physician's Recognition Award

Thirty TMA members qualified for the AMA Physician's Recognition Award during March, 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Sidney L. Bicknell, M.D., Jackson
David A. Birdwell, M.D., Knoxville
Allen S. Boyd, M.D., Memphis
Lonnie S. Burnett, M.D., Nashville
Ernest L. Cashion, M.D., Memphis
Billy L. Couch, M.D., Humboldt
Herbert S. Dodge, M.D., Memphis
George E. Duncan, M.D., Nashville
Jerry Engelberg, M.D., Memphis
James T. Farrar, M.D., Clarksville
Thaddeus H. Ferrell, M.D., Memphis
Albert S. Garrett, M.D., Knoxville
Kenneth A. Harper, M.D., Knoxville
James H. Hendrix, Jr., M.D., Memphis
Fontaine S. Hill, M.D., Memphis
Marc H. Hollender, M.D., Nashville
Henry C. Howerton, M.D., Nashville
Fred A. Killeffer, M.D., Knoxville
Elgin P. Kintner, M.D., Maryville
David MacNaughton, Jr., M.D.,
Chattanooga
Joe H. Miller, M.D., Memphis
Joe D. Mobley, M.D., Paris
Harvey S. Sanders, M.D., Nashville
Elbert C. Shackelford, M.D., Hendersonville
Stewart P. Smith, M.D., Chattanooga
Daphne Sprouse, M.D., Nashville
James W. Taylor, M.D., Knoxville
Eugen J. Winter, M.D., Nashville
Harrison Yang, M.D., Manchester
David R. Yates, M.D., Donelson

national news

From the AMA's Office in Washington, D.C.

AMA Says Trim FTC Reach

The American Medical Association has urged Congress to legislate the Federal Trade Commission out of the business of regulating the profession of medicine.

The "ultimate loser" as a result of the FTC's pres-

ent activities is "the patient—the men and women of America who will be victimized by the practices that responsible professionals are trying to prevent through reasonable self-regulation," said Newton Minow, lawyer for the AMA in its seventh-year legal battle against the FTC on the issue of physician advertising.

Minow, Joseph Boyle, M.D., Chairman of the AMA Board of Trustees, and James Sammons, M.D., AMA Executive Vice President, appeared before a House Commerce Subcommittee considering legislative proposals for reauthorizing the FTC.

Noting that the Supreme Court recently by a 4-4 vote failed to resolve the question of the FTC's jurisdiction over the professions, Minow said the issue now should be settled by Congress.

"We urge that this subcommittee act favorably on legislation that would clarify that Congress never empowered the FTC to regulate professional associations or to strike down duly enacted state laws governing the professions," said the lawyer. In the interim the AMA urged enactment of legislation (H.R. 3722) that would place a moratorium on FTC activities involving professional associations.

Dr. Boyle stressed that the moratorium would have no financial impact on the profession as a whole, that there is no self-interest involved. The problem with present FTC jurisdiction, Dr. Boyle said, is "the aberrant, unscrupulous physician who could make the patient suffer. The unscrupulous physician is freer than he was before; the FTC does not help the public."

Dr. Sammons told the subcommittee, headed by Rep. James Florio (D-NJ), that the FTC "accomplished absolutely nothing" except to jeopardize the status of medical ethics in its long legal battle with the AMA. There is "total adequacy" among the states and with the Justice Department to handle antitrust problems involving the professions, Dr. Sammons said. "We are not attempting to duck the antitrust laws by any means."

The lack of expertise at the FTC is "a mockery," he told the lawmakers. The agency focuses on cost without considering the question of quality, Dr. Sammons said.

Minow said the standards that the FTC applies to commercial firms "are not appropriate in dealing with the professions."

Congress, he said, "should not entrust regulation of medical or other professional organizations to an agency created to provide expertise in regulating industrial and commercial entities." The FTC "brings zero knowledge to the health field—zip." The agency, Minow told the lawmakers, "has demonstrated a commitment to impose its own values in place of responsible positions taken by the professions and in place of valid laws duly enacted by the sovereign states."

Any medical organization that resists the FTC "is subjected at a minimum to a very expensive preliminary process during which it must explain the important public interests served by such programs as certification of physician competence."

Dr. Boyle pointed out that the California Medical Association (CMA) was forced to sign a consent decree with the FTC on a relative value study after advice from lawyers that although the courts probably would uphold CMA, the cost of defending the associa-

tion's position would be \$1.5 million.

Asked at a news conference following the congressional testimony why the FTC was pursuing its course against the professions, Minow said many people at the agency see no difference between the professions and trade or business; they believe the marketplace is the best governor. In addition, Minow said, "there is the tendency of any government agency to expand its efforts."

"We think there is an enormous difference in values between the professions and trade or business, especially in medicine where professional values make a very big difference to patients," said Minow.

Dr. Sammons said the FTC "seems incapable of understanding what professionalism is all about. Their mind-set simply doesn't comprehend the nature of professionalism."

This attitude appears to be a "straight path toward total control and domination of the professions by the FTC," said Dr. Sammons.

Rep. Norman Lent (R-NY), a cosponsor of the Luken-Lee FTC moratorium bill, said that as he understood the AMA testimony the removal of jurisdiction over the professions from the FTC would leave no gaps in the law because of the continuing jurisdiction by the states and by the Justice Department. The AMA witnesses agreed.

Subcommittee chairman Florio pointed out that the chairman of the FTC, James Miller, and the Office of Management and Budget have opposed moves to strip the FTC of its professional jurisdiction.

In other testimony, American Dental Association (ADA) President Robert Griffiths said the FTC has "no business overriding state laws by administrative fiat." Noting that the ADA was a party to the Supreme Court decision on the AMA advertising case, Griffiths said that to leave the FTC's jurisdiction undefined is to leave the professions "to the whim and caprice of whomever had administrative charge of the agency at any given time."

The National Society of Professional Engineers also urged removal of FTC jurisdiction over professionals.

However, the American Nurses Association, the National Association of Chain Drugstores and the National Chiropractors Association opposed the removal of FTC jurisdiction over the learned professions.

Bill Would Make PSRO Worse, Not Better

The AMA has opposed two bills in Congress that would alter the Professional Standards Review Organization (PSRO) program. In testimony before the Senate Finance Subcommittee on Health, AMA trustee William H. Hotchkiss, M.D., said the Association opposed the two bills—S. 2142 and S. 1250—because "the proposals would continue many of the objectionable features of the existing PSRO program."

S. 2142 would repeal the existing PSRO program and replace it with a Utilization and Quality Control

Peer Review Organization. S. 1250 would establish an 11-member advisory group (six of the members would be physicians with PSRO experience) to advise the Department of Health and Human Services Secretary on consolidating PSRO areas.

Dr. Hotchkiss noted in his testimony that the proposed new program would be mandatory, just as the present PSRO program is. "Just as the PSRO program shifted from quality orientation to cost orientation, we see nothing in the bill that would likely cause a different result," he said. "The mandatory nature of the proposal would give the Secretary significant bargaining power in negotiating contracts with review organizations, and costs would become an overriding factor in negotiating objectives that would again be used in judging an organization's performance."

The AMA also objected to the fact that the new review organizations would be authorized at the government's discretion to conduct pre-review and post-review of services, examine Medicare providers' records, and inspect facilities where services are delivered. "This raises the potential that the program could direct medical care and interfere in the physician-patient relationship," Dr. Hotchkiss said.

In addition, Dr. Hotchkiss noted that under the proposed bill review could be performed by an organization that had no physician members, and the HHS Secretary could terminate a review contract at will. "The AMA objects to both provisions," he said.

In conclusion, Dr. Hotchkiss told the committee, "we do believe that a system of voluntary medical peer review could act effectively in assuring the quality of medical care for all patients, and that this could be accomplished without the substantial government expense of either the PSRO or proposed review organization program."

"The AMA will continue in the development of voluntary peer review. We believe that a voluntary system of peer review would serve the best interests of both the recipient and the provider of medical care."

Prospective Reimbursement Proposed for Medicare

A cost limitation plan for Medicare hospital reimbursement is gathering momentum in the nation's capitol. Endorsement of the idea by the American Hospital Association (AHA) may have paved the way for congressional enactment of a new reimbursement method this year.

The prospective fixed price program worked out by the AHA would "establish financial incentives for more efficient hospital services," said AHA President Alex McMahon at a Washington, D.C., news conference.

Hospitals would be paid at a prospectively fixed rate for their Medicare load (a certain amount for each Medicare patient admitted), with the rate of increase of Medicare hospital payments limited to about 14% in the fiscal year starting in October. This com-

compares with the 16% increase this year and a possible 17% or more next fiscal year. McMahon said the AHA plan could save the government \$1 billion in fiscal 1983.

At present, of course, hospitals are reimbursed under Medicare on the basis of costs incurred rather than according to an advanced formula.

The so-called prospective reimbursement plan has been proposed for many years in Congress without reaching passage. The Reagan administration is preparing its version of a prospective plan that is scheduled to be presented to Congress this spring.

McMahon said the present Medicare reimbursement system has "expansionist tendencies," and was so designed originally. But now in an era of government contraction, there must be a change, he said, declaring that controls won't work and noting the hospitals' opposition to a flat percentage cut, "which is just dead wrong."

McMahon said the AHA intends to make every effort to push its program within the administration and on Capitol Hill. In answer to a question at the news conference, he speculated that "prospective reimbursement" may be considered seriously in the future by private health insurers as a mechanism for keeping costs down in the private sector.

Asked about the degree of support for the plan among hospitals, McMahon said "my guess is that it would not be a unanimous agreement and that a number of hospitals would not like it at all."

Under the AHA proposal, the basis of payment is a predetermined fixed price per Medicare beneficiary discharge. (For technical reasons, discharge is employed rather than admission.)

For fiscal 1983, the fixed price would generally be set by adjusting the hospitals' own actual 1982 Medicare allowable costs per beneficiary discharge by a forecasted price index. Only hospital inpatient services would be covered initially.

The government would be required, after consultation with the hospital industry, to develop and present to Congress within two years a companion fixed price system for paying other hospital Medicare services—outpatient and emergency room.

The system would be mandated for all hospitals located within standard metropolitan statistical areas and for hospitals with 100 or more beds in other areas. The other hospitals would have the option of being paid on either the fixed price basis or the current cost-based reimbursement system.

Hospitals not satisfied with the fixed price would be permitted to bill beneficiaries directly for the difference, but the plan provides numerous incentives for hospitals to accept the Medicare rate as full payment.

In a letter to hospitals, McMahon made a point of the pressures rising in Congress and within the administration to reduce projected federal health care expenditures.

The AHA plan, he said, "provides opportunities and incentives for excellence in hospital management, while recognizing the new economic and political realities and protecting hospitals from arbitrary or unilateral decision-making by governments."

Congress to Get Veto Power Over Regs

The Senate has passed a bill making sweeping changes in the way the federal government handles regulations. Congress would have the power to veto regulations the lawmakers don't like. A similar bill is nearing House action.

Sponsors of the legislation contend that the government agencies often have gone beyond the intent of Congress in issuing regulations. The bills require cost-benefit analysis on major rules, periodic review of existing regulations, and restrict the use of federal funds to assist private groups attempting to influence regulations.

announcements

CALENDAR OF MEETINGS

NATIONAL

- | | |
|----------------|---|
| July 12-15 | American Orthopaedic Society for Sports Medicine—Tan-Tar-A Resort, Osage Beach, Mo. |
| July 25-29 | National Medical Association—San Francisco Hilton |
| July 29-Aug. 1 | International Doctors in Alcoholics Anonymous—Ramada O'Hara Inn, Des Plaines, Ill. |
| Aug. 2-5 | National Medical and Dental Association—Pinehurst, N.C. |
| Aug. 21-25 | American Pathology Foundation—Greenbrier, White Sulphur Springs, W. Va. |

STATE

- | | |
|------------|---|
| Aug. 13-14 | ECG Interpretation & Arrhythmia Management (Int'l. Medical Education Corp. Postgraduate Seminar)—Hyatt Regency, Nashville |
| Aug. 15-21 | International Society for Clinical Laboratory Technology and American Medical Technologists Joint Annual Convention—Opryland Hotel, Nashville |

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education

Accreditation. Application: For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

July 7-10	Vanderbilt/Bowman Gray Annual Mountain Meeting in Internal Medicine—Asheville, N.C. (12 hours)
July 27-31	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)
Sept. 20-24	Internal Medicine Review (40 hours)
Oct. 6-8	Recent Advances in Blood Banking
Oct. 7-10	Annual Frontiers in Nutrition Seminar (10 hours)
Oct. 15	Pain Management Workshop
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions
Oct. 29	Symposium on Leukemia and Lymphomas (7 hours)
Nov. 4-6	American Society for Microbiology Fall Meeting, Scientific Sessions
Nov. 17-19	Tennessee Public Health Association Annual Meeting, Scientific Sessions
Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D. Kermit R. Brown, M.D. Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D. John C. Ashurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.

Neurological Charles E. Brown, M.D.
 Thoracic and Cardiovascular..... David B. Todd, M.D.
 Ira D. Thompson, M.D.
 Urology..... Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

July 21-24 Snowmass Cardiology Conference
 Aug. 2-6 Practical Skills Workshop
 Sept. 23-24 Newborn Conference
 Oct. 1-2 Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)

Knoxville

Nov. 6-7 Loss Prevention

World's Fair

Aug. 19-21 Cardiology Update (M)
 Sept. 2-4 Perinatology for Practitioners (M)
 Sept. 9-11 Perspectives in Medical Genetics—1982 (M)
 Oct. 13-15 3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology (K)
 Oct. 21-23 Office Ultrasound (K)
 Oct. 27-30 Cancer Concepts (K)
 (K) Contact the Knoxville office for information.
 (M) Contact the Memphis office for information.

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

TENNESSEE ACADEMY OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY

Aug. 29-Sept. 1 Otolaryngology Assembly (Annual Tri-State Assembly), in conjunction with the annual meeting of the North Carolina and South Carolina Societies of Otolaryngology and Maxillo-Facial Surgery—Knoxville Hilton, Knoxville. *Fee:* Nonmembers \$200; members and residents \$75. *Credit:* 12 hours AMA Category 1.

For information contact Milton G. Yoder, M.D., 204 Fort Sanders Professional Bldg., 501 20th St., Knoxville, TN 37916.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management Of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices. The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maultsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

Oct. 31- 13th Family Medicine Review—Session III
 Nov. 5

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

July 26-28 Pediatric Update 1982—Kiawah Island, S.C.
 Aug. 2-6 Taxes and Investments—Hilton Head Island, S.C.
 Aug. 9-11 High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

MEDICAL COLLEGE OF VIRGINIA

Aug. 5-7 Pediatrics at the Beach, 4th Annual Pediatric Primary Care Conference—Sheraton Beach Inn, Virginia Beach, Va.

For information contact Kathy E. Johnson, Box 48, MCV Station, Richmond, VA 23298, Tel. (804) 786-0494.

Highlights of the TMA Board of Trustees Meetings

April 14 and April 17, 1982

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at the first session of its regular second quarter meeting, April 14, 1982.

THE BOARD:

Committee Appointments	(See complete listing of committee appointments published elsewhere in this issue.)
THA Nursing Resolution	Reaffirmed support of the concept of a study group to study the nursing situation in Tennessee.
Ad Hoc Committee on Smoking	Reappointed the TMA Ad Hoc Committee on Smoking to implement the recommendations of the House of Delegates in establishing a special statewide communication program.
Drug Prescribing Program	Heard a report that the Drug Prescribing Program, which was cosponsored by TMA and Vanderbilt, has concluded and a full report with the results of the program will be presented at the October Board meeting.
Geriatric Education Program	Endorsed a University of Tennessee Geriatric Education Program. Dr. Carl Adams, chairman of the TMA Long Term Health Care Committee, and Drs. William Applegate and Charles Clarke from the University of Tennessee-Memphis, addressed the Board regarding the need for a statewide educational effort in geriatric training. They emphasized that the intent was not to establish another specialty in medicine, but to involve all fields of medicine in this geriatric program to upgrade the quality of care of the aged. Dr. Clarke advised the Board that application for a federal grant had been made to further this program.
Appointment of Ad Hoc Committee on Block Grants	Appointed an Ad Hoc Committee on Block Grants to work with state government and the Commissioner of Public Health. The Committee will consist of representatives from five specialty groups of primary care—Pediatrics, Ob-Gyn, Family Practice, Psychiatry, Internal Medicine, plus the chairman of TMA Governmental Services Committee, the TMA Board chairman, TMA President, and a representative from the Crippled Children's Advisory Committee.
Tennessee Medical Foundation Board	Appointed Drs. C. Eugene Jabbour, Memphis, H. Trent Vandergriff, Maryville, and Clarence R. Sanders, Gallatin, to serve on the Board of the Tennessee Medical Foundation.
IMPACT Board Appointments	Appointed Dr. H. Victor Braren, Nashville, to serve on the IMPACT Board as a result of the vacancy created by the resignation of Dr. Robert W. Ikard, Nashville. Also appointed Mrs. Cynthia Himmelfarb to the IMPACT Board as the TMA Auxiliary representative.
Jail Health Care	Agreed to participate in a program designed to upgrade health care in jails. The jails in the state will participate in a program to upgrade their health care and be accredited as meeting AMA-developed standards. If a jail accepts the invitation, TMA would provide a physician to assist in a site survey, and the signature of the Association would be included on the Certificate of Accreditation when the standards are reached.
Approval of Annual Audit	Approved the formalized TMA audit for 1981 performed by Mr. Ezra Jones, CPA, and the first quarter operating report including receipts, disbursements and investments.
Commendation	Agreed to award a plaque to Dr. John H. Burkhardt, Knoxville, for his outstanding service as a TMA member. This was the 30th consecutive year he had served as a member of the House of Delegates.

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at the second session of its regular second quarter meeting, April 17, 1982.

THE BOARD:

Election Results

Elected Dr. James T. Galyon, Memphis, as chairman of the TMA Board of Trustees and Dr. James R. Royal, Chattanooga, as vice chairman of the Board. Dr. George H. Wood, Knoxville, was reelected secretary-treasurer, and Mr. L. Hadley Williams was reelected assistant secretary-treasurer.

Elected as the Board's Executive Committee were Drs. George W. Holcomb, Jr., Nashville, chairman; James T. Galyon, Memphis; Nat E. Hyder, Jr., Johnson City; Allen S. Edmonson, Memphis; and George H. Wood, Knoxville.

Elected as the Finance Committee of the Board were Drs. George H. Wood, Knoxville, chairman; James R. Royal, Chattanooga; and C. Eugene Jabbour, Memphis.

Off-Shore Medical Schools

Referred to the TMA Hospital Committee a problem regarding advertising in the state by certain foreign medical schools attempting to develop affiliations with colleges and universities which would permit the reservations of positions in their schools of medicine and veterinary medicine.

1985 Annual Meeting

Chose the Hyatt-Regency in Memphis as the headquarters site of the 1985 TMA Annual Meeting.

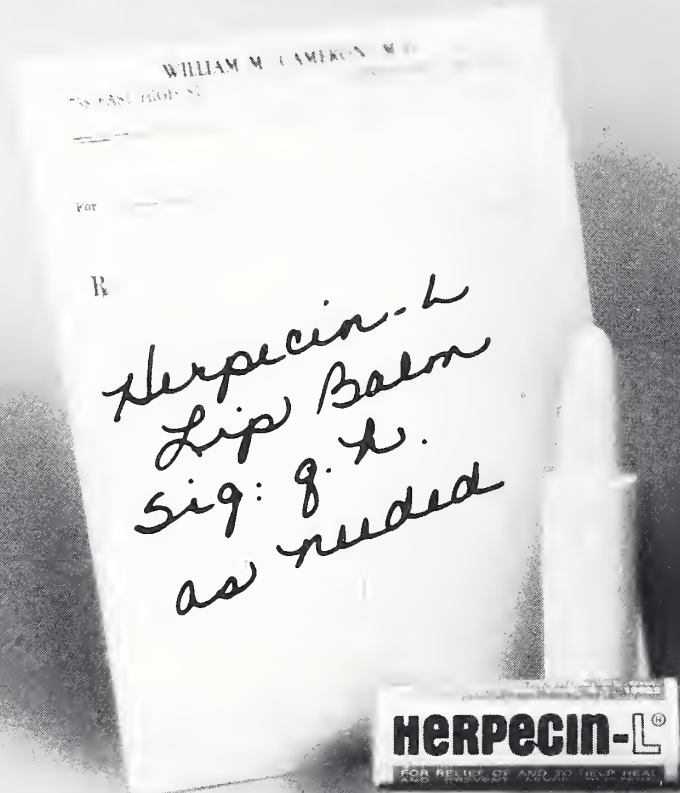
TMA-SEF Board Appointment

Appointed Dr. Patrick J. Murphy, Memphis, to the TMA-Student Education Fund Board.

AMA Delegate Appointment

Named Dr. George Zirkle, Jr., as AMA alternate delegate, replacing Dr. Kent Carter, who resigned.

Dx: recurrent herpes labialis



OTC.
See PDR for
Product Information.

For samples, write:
Campbell Laboratories Inc.
P.O. Box 812-M, FDR Sta.
New York, NY 10150

In Tennessee, "Herpecin-L" Lip Balm is available at
all Super D Drug Stores and other select pharmacies.

GROUP INSURANCE PLANS AVAILABLE TO TMA MEMBERS

For Details of Each Plan Contact the Administrator

TYPE OF COVERAGE	COMPANY	ADMINISTRATOR
Group Life Insurance/Accidental Death & Dismemberment. Members and spouses \$25,000 up to \$350,000. Employees of members \$10,000 up to \$100,000. Accidental death and dismemberment benefit \$10,000 up to \$250,000.	Great-West Life Assurance Company of Winnipeg, Canada	Insurance Planning & Service Co., Inc. P. O. Box 1109 Chattanooga, TN 37401 Telephone: (800) 572-7389
Hospital and Nurse Expense Insurance Program. \$25,000 benefit with deductibles of \$300, \$500 or \$1,000. Surgical benefits optional.	Commercial Insurance Company of Newark, N.J. (A Subsidiary of the Continental Insurance Companies)	Smith, Reed, Thompson and Ellis Co. P. O. Box 1280 Nashville, TN 37202 Telephone: (615) 361-6846
Excess Major Medical Plan. Pays up to \$1 million after deductibles of \$25,000 or \$50,000 have been met.	Sentry Insurance of Stevens Point, Wis. (A Mutual Company)	Smith, Reed, Thompson and Ellis Co. P.O. Box 1280 Nashville, TN 37202 Telephone: (615) 361-6846
In Hospital Protection Insurance. \$20 to \$80 per day while hospitalized in addition to any other insurance. Spouse, children, and employees eligible.	Commercial Insurance Company of Newark, N.J. (A Subsidiary of the Continental Insurance Companies)	Smith, Reed, Thompson and Ellis Co. P.O. Box 1280 Nashville, TN 37202 Telephone: (615) 361-6846
24-Hour High Limit Accidental Death & Dismemberment Insurance. \$25,000 to \$100,000 coverage. May include spouse and children.	Commercial Insurance Company of Newark, N.J. (A Subsidiary of the Continental Insurance Companies)	Smith, Reed, Thompson and Ellis Co. P.O. Box 1280 Nashville, TN 37202 Telephone: (615) 361-6846
Professional & Premises Liability Insurance. Modified claims-made coverage from \$100,000/\$300,000 to \$5 million/\$7 million.	State Volunteer Mutual Insurance Company	State Volunteer Mutual Insurance Co. P.O. Box 70 Brentwood, TN 37027 Telephone: (615) 377-1999 or (800) 342-2239
Workers' Compensation Insurance. Standard coverage at approved rates with yearly savings opportunity based on claim experience. 30% savings paid in 1981.	Dodson Insurance Group	Mr. Glenn Cross 716 Robert Burns Drive Nashville, TN 37217 Telephone: (615) 361-6280
Disability Income Plan. \$1,000 Accidental D & D. Monthly indemnity up to \$3,000. Five year accident/five year sickness plan. Lifetime accident coverage and to age 65 for sickness. Optional hospital benefits. Plans also available for employees of members.	Commercial Insurance Company of Newark, N.J. (A Subsidiary of the Continental Insurance Companies)	Smith, Reed, Thompson and Ellis Co. P.O. Box 1280 Nashville, TN 37202 Telephone: (615) 361-6846
Overhead Expense Insurance. Benefits from \$300 to \$5,000 per month beginning on 31st day of disability and may continue for up to 24 months. Also provides coverage for equipment leasing.	Continental Casualty Company.	John E. Lovelace and Associates, Inc. P.O. Box 452 Brentwood, TN 37027 Telephone: (615) 373-1996
\$100,000 Accidental Death & Dismemberment Coverage while a passenger in a licensed passenger aircraft or if struck by any aircraft. TMA membership only. As a membership service, this insurance is provided by TMA for every member at no cost.	Reliance Standard Life Insurance Company	Insurance Planning & Service Co., Inc. P.O. Box 1109 Chattanooga, TN 37401 Telephone (800) 572-7389

COUNTY MEDICAL SOCIETIES—1982-1983 OFFICERS

Tennessee Medical Association

BEDFORD

Pres.—Fred Ownby, M.D., Bell Buckle
Secy.—Carl Rogers, M.D.
102 Riverview Bldg., Shelbyville 37160

BENTON-HUMPHREYS

Pres.—Wallace J. McClure, M.D., Waverly
Secy.—Arthur W. Walker, M.D.
South Church St., Waverly 37185

BLOUNT

Pres.—James M. Callaway, M.D., Maryville
Secy.—Russell H. Dreyer, M.D.
317 Avenue C, #15, Maryville 37801

BRADLEY

Pres.—Ed Duncan, M.D., Cleveland
Secy.—John Standridge, M.D.
2805 Westside Dr., Suite F, Cleveland 37311

BUFFALO RIVER VALLEY

Pres.—James H. McGinley, M.D., Centerville
Secy.—Parker D. Elrod, M.D.
P.O. Box 277, Centerville 37033

CAMPBELL

Pres.—James W. Giles, M.D., LaFollette
Secy.—L. J. Seargeant, M.D.
Box 1381, LaFollette 37766

CHATTANOOGA-HAMILTON

Pres.—Robert Myers, M.D., Chattanooga
Secy.—Pete S. Soteres, M.D., Chattanooga
Exec. Dir.—Mrs. Flo Richardson
960 E. 3rd St., #313, Chattanooga 37403

COCKE

Pres.—David McConnell, M.D., Newport
Secy.—Glen C. Shults, M.D.
501 E. Main St., Newport 37821

COFFEE

Pres.—Ho Kin, M.D., Tullahoma
Secy.—M. Milan, M.D.
630 Wilson Ave., Tullahoma 37388

CONSOLIDATED

Pres.—Jimmy Fields, M.D., Milan
Secy.—James Warmbrod, M.D.
616 W. Forest Ave., Jackson 38301

CUMBERLAND

Pres.—Carl T. Duer, M.D., Crossville
Secy.—Robert Wood, M.D.
802 Webb Ave., Crossville 38555

DeKALB

Pres.—Ken Abbott, M.D., Smithville
Secy.—Melvin L. Blevins, M.D.
100 Church St., Smithville 37166

DICKSON

Pres.—Walter Bell, Jr., M.D., Dickson
Secy.—Jeffery S. Gordon, M.D.
111 Hwy. 70 East, Dickson 37055

FENTRESS

Pres.—B. F. Allred, M.D., Jamestown
Secy.—Richard G. Clark, M.D.
Jamestown 38556

FRANKLIN

Pres.—Thomas A. Smith, M.D., Winchester
Secy.—Thomas F. Zimmerman, M.D.
Franklin Co. Med. Clinic, Winchester 37398

GILES

Pres.—Walid Al Agha, M.D., Pulaski
Secy.—Charles W. Burger, M.D.
215 Cedar Lane, Pulaski 38478

GREENE

Pres.—Steve Flohr, M.D., Greenville
Secy.—Richard Aasheim, M.D.
1021 Coolidge St., Greenville 37743

LAKEWAY

Pres.—Omer C. Renner, M.D., Morristown
Secy.—W. Robert Gronewald, M.D.
525 McFarland, Morristown 37814

HAWKINS

(No Report)

HENRY

Pres.—John Senter, M.D., Paris
Secy.—Vince Tusa, M.D.
Paris Clinic, Paris 38242

JACKSON

Pres.—E. M. Dudley, M.D., Gainesboro
Secy.—J. S. Johnson, M.D.
Gainesboro 38562

KNOXVILLE

Pres.—Richard L. Hobart, Jr., M.D., Knoxville
Secy.—Don R. Heiser, M.D., Knoxville
Exec. Secy.—Mrs. Jane Smith
422 W. Cumberland Ave., Knoxville 37902

LAWRENCE

Pres.—J. Carmack Hudgins, M.D., Lawrenceburg
Secy.—Alfred E. Turman, M.D.
P.O. Box 40, Lawrenceburg 38464

LINCOLN

Pres.—Sam M. Ashby, M.D., Fayetteville
Secy.—Robert W. Orgain, M.D.
1797 Wilson Pkwy., Fayetteville 37334

MACON

Pres.—Charles C. Chitwood, M.D., Lafayette
Secy.—Wilbert E. Brooks, M.D.
209 Locust Ave., Lafayette 37083

MARSHALL

Pres.—Jones F. Rutledge, M.D., Lewisburg
Secy.—Michael Tepedino, M.D.
204-3rd Ave. North, Lewisburg 37091

MAURY

Pres.—George A. Fiedler, Jr., M.D., Columbia
Secy.—Charles Hudson, M.D.
1401 Hatcher Lane, Columbia 38401

McMINN

Pres.—Larry Hargis, M.D., Athens
Secy.—William Morris, M.D.
3 Grove St., Athens 37303

MEMPHIS-SHELBY

Pres.—Hugh Francis, Jr., M.D., Memphis
Secy.—James A. Mann, M.D., Memphis
Exec. Vice Pres.—Mr. John Westenberger
6242 Poplar Ave., Memphis 38119

MONROE

Pres.—Barbara Levin, M.D., Madisonville
Secy.—William Harvey, M.D.
Route #5, Madisonville 37354

MONTGOMERY

Pres.—R. J. Vermillion, M.D., Clarksville
Secy.—B. B. Ledbetter, M.D.
Hospital Doctors Bldg., Clarksville 37040

NASHVILLE-DAVIDSON

Pres.—Ronald E. Overfield, M.D., Nashville
Secy.—Kent Kyger, M.D., Nashville
Exec. Dir.—Mr. Raymond Schklar
205-23rd Ave. North, Nashville 37203

NORTHWEST

Pres.—Nathan Porter, M.D., Greenfield
Secy.—Kenneth Carr, M.D., Martin
Corresp. Secy.—Jose A. Veciana, M.D.
Volunteer General Hosp., Martin 37237

OVERTON

Pres.—Fred Looper, M.D., Livingston
Secy.—Edwin R. Forsberg, M.D.
W. Main St., Livingston 38570

PUTNAM

Pres.—Charles T. Womack, M.D., Cookeville
Secy.—Thurman Shipley, M.D.
135 W. 2nd St., Cookeville 38501

ROANE-ANDERSON

Pres.—Francis R. Reid, M.D., Oak Ridge
Secy.—Charles W. Bruton, M.D.
Medical Arts Bldg., Oak Ridge 37830

ROBERTSON

Pres.—John Jackson, M.D., Springfield
Secy.—Edita Milan, M.D.
102 Crescent Dr., Springfield 37172

RUTHERFORD/STONES RIVER

Pres.—Harold Akin, M.D., Murfreesboro
Secy.—Ben Shelton, M.D.
Smyrna Sq. Shopping Ctr., Smyrna 37167

SCOTT

Pres.—Tom Hall, M.D., Oneida
Secy.—George Kline, M.D.
Alberta Ave., Oneida 37841

SEVIER

Pres.—Vincent B. Tolley, M.D., Sevierville
Secy.—John C. Jacobs, Jr., M.D.
Middle Creek Rd., Sevierville 37862

SMITH

Pres.—E. K. Bratton, M.D., Hartsville
Secy.—Hugh E. Green, M.D.
622 Jackson Ave., Carthage 37030

SULLIVAN-JOHNSON

Pres.—Billy N. Golden, M.D., Kingsport
Secy.—Donald W. Bales, M.D.
202 W. Ravine, Kingsport 37660

SUMNER

Pres.—Diedre Cagle, M.D., Gallatin
Secy.—John C. Flynn, M.D.
167 Lake Valley Rd., Hendersonville 37075

TIPTON

Pres.—Jiunn Ho Ho, M.D., Covington
Secy.—Jesse Cannon, M.D.
P.O. Box 737, Covington 38019

WARREN

Pres.—Glenn Davis, M.D., McMinnville
Secy.—David Bratton, M.D.
River Park Medical Ctr., McMinnville 37110

WASHINGTON-CARTER-UNICOI

Pres.—Phillip Roe, M.D., Johnson City
Secy.—David W. Jones, M.D., Johnson City
Exec. Secy.—Mrs. Beatrice Hudswell
400 State of Franklin, Johnson City 37601

WHITE

Pres.—Dan Bramlett, M.D., Sparta
Secy.—Harold Andrews, M.D.
East Bockman Way, Sparta 38583

WILLIAMSON

Pres.—A. J. Bethurum, M.D., Franklin
Secy.—D. C. York, M.D.
West Main St., Franklin 37064

WILSON

Pres.—Sam B. McFarland, M.D., Lebanon
Secy.—T. R. Puryear, M.D.
239 E. Main St., Lebanon 37087

STANDING COMMITTEES OF THE TENNESSEE MEDICAL ASSOCIATION

COMMITTEE ON SCIENTIFIC AFFAIRS

Oscar M. McCallum, M.D., *Chairman* Henderson
George W. Shannon, M.D. Jackson
Claude H. Crockett, Jr., M.D. Bristol
H. Verdain Barnes, M.D. Chattanooga
Francis W. Gluck, Jr., M.D. Nashville
John B. Thomison, M.D. (Ex-Officio) Nashville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON LEGISLATION

James W. Hays, M.D., *Chairman* Nashville
Virgil H. Crowder, Jr., M.D. Lawrenceburg
Thurman L. Pedigo, M.D. McMinnville
Allen S. Edmonson, M.D. Memphis
Arden J. Butler, Jr., M.D. Ripley
David H. Turner, M.D. Chattanooga
Harold L. Neuenschwander, M.D. Knoxville
Nat E. Hyder, Jr., M.D. Johnson City
John B. Thomison, M.D. (Ex-Officio) Nashville
Charles W. White, M.D. (Div. Coordinator) Lexington
Chairmen of Four Metropolitan Societies' Legislative Committees

John B. Dorian, M.D. Memphis
H. Victor Braren, M.D. Nashville
John T. Purvis, M.D. Knoxville
Paul V. Nolan, M.D. Chattanooga

COMMITTEE ON GOVERNMENTAL MEDICAL SERVICES

George A. Zirkle, Jr., M.D., *Chairman* Knoxville
E. Kent Carter, M.D. Kingsport
David H. Turner, M.D. Chattanooga
Rodney G. Elliott, M.D. Memphis
J. Kelley Avery, M.D. Union City
James W. Hall, M.D. Trenton
Oscar M. McCallum, M.D. Henderson
Virgil H. Crowder, Jr., M.D. Lawrenceburg
C. David Scheibert, M.D. Nashville
Eugene W. Fowinkle, M.D. (Ex-Officio) Nashville
Charles W. White, M.D. (Div. Coordinator) Lexington

COMMITTEE ON TMA GROUP INSURANCE

Lloyd C. Davis, M.D., *Chairman* Knoxville
David R. Pickens, M.D. Nashville
Phil E. Orpet, Jr., M.D. Memphis
James R. Royal, M.D. (Div. Coordinator) Chattanooga

COMMITTEE ON CONSTITUTION AND BY-LAWS

John H. Burkhart, M.D., *Chairman* Knoxville
Robert H. Haralson, Jr., M.D. Maryville
Henry P. Pendergrass, M.D. Nashville
David R. Yates, M.D. Donelson
Lehman C. Sammons, Jr., M.D. Memphis
C. Eugene Jabbour, M.D. Memphis

COMMITTEE ON COMMUNICATIONS AND PUBLIC SERVICE

Alfred P. Rogers, M.D., *Chairman* Chattanooga
Robert G. Brown, M.D. Greeneville
Robert M. Overholt, M.D. Knoxville
Lehman C. Sammons, Jr., M.D. Memphis
Rex A. Amonette, M.D. Memphis
Charles W. White, M.D. Lexington
William Ralph, Jr., M.D. Nashville
Joseph C. Knight, M.D. Murfreesboro

Jack P. Powell, M.D. Nashville
John B. Thomison, M.D. (Ex-Officio) Nashville
George H. Wood, M.D. (Div. Coordinator) Knoxville

PEER REVIEW COMMITTEE

David H. Turner, M.D., *Chairman* Chattanooga
John B. Dorian, M.D. Memphis
James W. Hays, M.D. Nashville
George A. Zirkle, Jr., M.D. Knoxville
Allen S. Edmonson, M.D. Memphis
James R. Royal, M.D. (Div. Coordinator) Chattanooga

COMMITTEE ON HOSPITALS

A. Roy Tyrer, Jr., M.D. *Chairman* Memphis
E. Greer Richardson, M.D. Memphis
H. Barry Heywood, III, M.D. Chattanooga
Duane C. Budd, M.D. Johnson City
William K. Striker, M.D. Chattanooga
George R. Mayfield, Jr., M.D. Columbia
Jefferson C. Pennington, Jr., M.D. Madison
James R. Royal, M.D. (Div. Coordinator) Chattanooga

INTERPROFESSIONAL LIAISON COMMITTEE

Thomas K. Ballard, M.D., *Chairman* Jackson
James A. Moore, M.D. Memphis
Albert J. Grobmyer, III, M.D. Memphis
Joseph B. Moon, M.D. Knoxville
Hays Mitchell, M.D. Cleveland
Duane C. Budd, M.D. Johnson City
Roger K. White, M.D. Nashville
Henry P. Pendergrass, M.D. Nashville
Charles E. Jordan, M.D. Cookeville
George H. Wood, M.D. (Div. Coordinator) Knoxville

COMMITTEE ON CONTINUING MEDICAL EDUCATION

John B. Thomison, M.D., *Chairman* Nashville
Allan D. Bass, M.D. Nashville
Howard S. Kirshner, M.D. Nashville
James T. DeBerry, M.D. Cookeville
Thomas K. Ballard, M.D. Jackson
Thomas V. Stanley, M.D. Memphis
T. James Humphreys, M.D. Jackson
James H. Ragsdale, M.D. Union City
William P. Grigsby, M.D. Kingsport
William D. Black, M.D. Knoxville
Marvin R. Batchelor, M.D. Cleveland
Robert B. Gilbertson, M.D. Knoxville
Sanford L. Weiler, M.D. Chattanooga
Charles E. Allen, M.D. (Consultant) Johnson City
John L. Sawyers, M.D. (Div. Coordinator) Nashville

Representatives of Medical Schools and Clinical Education Centers

Robert C. Coddington, M.D.—UTCEC, Chattanooga
Richard L. Whittaker, M.D.—UTCEC, Knoxville
George W. Shannon, M.D.—UTCEC, Jackson
Frank A. Perry, M.D.—Meharry Medical School, Nashville
Addison B. Scoville, M.D.—Vanderbilt University School of Medicine, Nashville

MEDIATION COMMITTEE

James W. Hays, M.D., *Chairman* Nashville
George A. Zirkle, Jr., M.D. Knoxville
Allen S. Edmonson, M.D. Memphis
James R. Royal, M.D. (Div. Coordinator) Chattanooga

SPECIAL COMMITTEES OF THE TENNESSEE MEDICAL ASSOCIATION

COMMITTEE ON OCCUPATIONAL HEALTH—STANDBY

James J. Lawson, M.D., *Chairman* New Johnsonville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON ENVIRONMENTAL HEALTH—STANDBY

James B. Ely, M.D., *Chairman* Knoxville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON BLOOD BANKS AND MEDICAL LABORATORIES—STANDBY

John K. Duckworth, M.D., *Chairman* Memphis
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

LIAISON COMMITTEE TO MEDICAL SCHOOLS IN TENNESSEE—STANDBY

John L. Sawyers, M.D., *Chairman* Nashville

COMMITTEE ON REHABILITATION—STANDBY

Robert E. Tooms, M.D., *Chairman* Memphis
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON RURAL HEALTH

F. Houston Lowry, M.D., *Chairman* Madisonville
Joseph L. Willoughby, M.D. Franklin
Melvin L. Blevins, M.D. Smithville
Jerry L. Shipley, M.D. Livingston
Lester F. Littell, M.D. Dayton
John S. Burrell, M.D. Lake City
Hobart H. Beale, M.D. Martin
John D. Lay, M.D. Savannah
George H. Wood, M.D. (Div. Coordinator) Knoxville

Consultants

Hiram Kitchen, D.V.M., Ph.D.—Dean, UT College of Veterinary Medicine, Knoxville
M. Lloyd Downen, Ph.D.—UT Agricultural Extension Service, Knoxville
Mr. Kenneth Cherry—Tennessee Rural Health Improvement Association, Columbia

COMMITTEE ON EMERGENCY MEDICAL SERVICES

James C. Prose, M.D., *Chairman* Knoxville
C. Robert Clark, M.D. Chattanooga
James E. Henry, Jr., M.D. Knoxville
H. Trent Vandergriff, M.D. Maryville
James L. Allen, M.D. Sweetwater
Shawn Gazaleh, M.D. Chattanooga
Loren A. Crown, M.D. Memphis
Phillip E. Wright, II, M.D. Memphis
Daniel J. Scott, Jr., M.D. Memphis
Robert C. Reeder, M.D. Memphis
William L. Webb, Jr., M.D. Memphis
James T. Craig, Jr., M.D. Jackson
Kenneth J. Phelps, Sr., M.D. Lewisburg
R. Benton Adkins, M.D. Nashville
Jack P. Powell, M.D. Nashville
Parker D. Elrod, M.D. Centerville
Stephen Schillig, M.D. Nashville
Ronald E. Rosenthal, M.D. Nashville
Norman D. Hasty, M.D. Nashville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

ADVISORY COMMITTEE TO THE TENNESSEE MEDICAL ASSOCIATION AUXILIARY

Jacob T. Bradsher, M.D., *Chairman* Knoxville
William F. Buchner, M.D. Chattanooga
Kent Kyger, M.D. Nashville
Dennis A. Higdon, M.D. Memphis
George H. Wood, M.D. (Div. Coordinator) Knoxville

COMMITTEE ON MENTAL HEALTH

Kent Kyger, M.D., *Chairman* Nashville
Roger K. White, M.D. Nashville
William C. Greer, M.D. Chattanooga
Marshall D. Hogan, Jr., M.D. Kingsport
David V. MacNaughton, M.D. Chattanooga
John H. L. Marshall, M.D. Knoxville
John A. Wilson, M.D. Kingsport
Harvey C. Reese, Jr., M.D. Memphis
Harris L. Smith, M.D. Jackson
James S. Brown, M.D. (Ex-Officio) Nashville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON MEDICINE AND RELIGION

Alfred P. Rogers, M.D., *Chairman* Chattanooga
Clarence E. Goulding, M.D. Johnson City
Doran D. Edwards, M.D. Nashville
John S. Wolf, Jr., M.D. Nashville
Ted W. Hill, M.D. Gallatin
James H. Ragsdale, M.D. Union City
Lee Rush, Jr., M.D. Somerville
Robert P. N. Shearin, M.D. Memphis
Leslie B. Shumake, M.D. Memphis
James H. Donnell, M.D. Jackson
George H. Wood, M.D. (Div. Coordinator) Knoxville

COMMITTEE ON MATERNAL AND CHILD CARE

Robert R. Young, M.D., *Chairman* Union City
Herbert A. Taylor, III, M.D. Memphis
Patrick J. Sweeney, M.D. Memphis
Irvin Ray King, M.D. Knoxville
Lewis F. Cosby, Jr., M.D. Johnson City
Samuel S. Binder, M.D. Chattanooga
B. K. Hibbett, III, M.D. Nashville
James C. Hudgins, Jr., M.D. Lawrenceburg
Anne U. Bolner, M.D. Fayetteville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

Maternal Mortality Subcommittee

B. K. Hibbett, III, M.D., *Chairman* Nashville
Larry T. Arnold, M.D. Nashville
James C. Hudgins, M.D. Lawrenceburg
B. J. Smith, M.D. Dickson
A. J. Mueller, M.D. Jackson
William Stepp, Jr., M.D. Memphis
James S. Bell, M.D. Memphis
Robert L. Harrington, M.D. Dyersburg
Irvin Ray King, M.D. Knoxville
Stephen C. Prinz, M.D. Knoxville
Frank H. Boehm, M.D. (Consultant) Nashville
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON LONG TERM HEALTH CARE

Carl E. Adams, M.D., *Chairman* Murfreesboro
Eugene W. Fowinkle, M.D. Nashville
Joseph L. Willoughby, M.D. Franklin
Frank L. Jayakody, M.D. Nashville
H. Campbell Haynie, M.D. Brentwood
M. F. Langston, M.D. Signal Mountain
I. Lee Arnold, M.D. Chattanooga
Charles L. Frost, M.D. Bolivar
Robert T. Tucker, M.D. Jackson
Charles L. Clark, M.D. Memphis
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

Consultant

Mr. Richard Sadler—Executive Director, Tennessee Health
Care Association, Nashville

IMPAIRED PHYSICIAN COMMITTEE

John B. Dorian, M.D., *Chairman* Memphis
Howard W. Thomas, M.D. Savannah
J. P. Anderson, M.D. Memphis
Parks W. Walker, Jr., M.D. Memphis
A. Ray Mayberry, M.D. Maryville
C. Paul McCammon, M.D. Knoxville
M. F. Perrin, M.D. Chattanooga
A. Glenn Kennedy, M.D. Knoxville
Howard R. Foreman, M.D. Nashville
Charles B. Thorne, M.D. Nashville
Allan D. Bass, M.D. Nashville
William C. Anderson, M.D. Nashville
Thomas B. Miller, M.D. Madison
Mrs. John B. Turner (Auxiliary Rep.) Springfield
C. Eugene Jabbour, M.D. (Div. Coordinator) Memphis

COMMITTEE ON HEALTH PLANNING

George H. Wood, M.D., *Chairman* Knoxville
Nat E. Hyder, Jr., M.D. Johnson City
Joseph W. Harb, M.D. Knoxville
Jack E. Butterworth, Jr., M.D. Bristol
Sanford Wyler, M.D. Chattanooga
C. Windom Kimsey, M.D. Chattanooga
Oscar M. McCallum, M.D. Henderson
Edward W. Reed, M.D. Memphis
Rodger P. Lewis, M.D. Union City
C. Richard Treadway, M.D. (Ex-Officio) Nashville
Eugene W. Fowinkle, M.D. (Ex-Officio) Nashville
Charles W. White, M.D. (Div. Coordinator) Lexington

PRIMARY HEALTH CARE CLINICS COMMITTEE

Hays Mitchell, M.D., *Chairman* Cleveland
James W. Hays, M.D. Nashville
Norman L. Henderson, M.D. Lawrenceburg
John O. Williams, M.D. Mt. Pleasant
Alfred D. Beasley, M.D. Knoxville
James H. Segars, M.D. Knoxville
James A. Moore, M.D. Memphis
James R. Royal, M.D. (Div. Coordinator) Chattanooga

Division Coordinators are members of the Board of Trustees
assigned to oversee the activities of the respective commit-
tees.

INDEPENDENT MEDICINE'S POLITICAL ACTION COMMITTEE—TENNESSEE

Board of Directors

First District Jack E. Butterworth, Jr., M.D.,
Bristol, *Chairman*
Second District .. Harold L. Neuenschwander, M.D.,
Knoxville
Third District Paul V. Nolan, M.D.,
Chattanooga
Fourth District. Thurman L. Pedigo, M.D.,
McMinnville
Fifth District H. Victor Braren, M.D.,
Nashville
Sixth District Clarence R. Sanders, M.D.,
Gallatin
Seventh District Oscar M. McCallum, M.D.,
Henderson, *Secretary-Treasurer*
Eighth District Thomas K. Ballard, M.D.,
Jackson
Ninth District Rex A. Amonette, M.D.,
Memphis
Representing the
TMA Auxiliary Mrs. Elliot H. Himmelfarb,
Franklin

TENNESSEE MEDICAL ASSOCIATION STUDENT EDUCATION FUND

Board of Directors

John H. Burkhart, M.D., *President* Knoxville
Robert H. Haralson, Jr., M.D.,
Vice President Maryville
Robert L. Chalfant, M.D.,
Secretary-Treasurer Nashville
Charles E. Allen, M.D. Johnson City
Allen S. Boyd, Jr., M.D. Memphis
Patrick J. Murphy, M.D. Memphis
James G. Quinn, M.D. Chattanooga
James T. Galyon, M.D. (Ex-Officio) Memphis

Pro-Competition Legislation: Friend or Foe?

DR. WINFIELD C. DUNN

In November, 1980, the American people reaffirmed their faith in the basic tenets of our private enterprise, freedom of opportunity oriented society. We chose a new direction rather than continuing down a more centralized socioeconomic road which could have only led us to increased government involvement in our society and in our economy. It appears certain that there will be major changes ahead as we reflect on what has been achieved in a relatively short time, thanks to the action of the current national Congress in response to strong leadership from the White House.

It has been my privilege for five years to be associated with a company that is deeply involved in change as it relates to the delivery of health care. It is a company that has also been plowing some new ground. Although it has been often misunderstood, I believe it is increasingly becoming acknowledged as having been on the cutting edge of change in the field of health care management. It has been an enlightening time for me.

Today, it appears clear that even greater change is on the way in the field of health care, particularly in the so-called health care marketplace. I believe that the significance of change cannot be overestimated. There is clear evidence that leaders in the health professions and in government have decided to come to grips with the fact that we have been ignoring the value of basic economic considerations. That is the basis on which my optimism for the future currently rests.

We are told that today Americans are spending at an annualized rate of approximately \$275 billion for personal health care needs. One might ask, "Why shouldn't we be permitted to spend whatever we wish in the pursuit of health and happiness?" While acknowledging the fact that in a free society we have such a right, no one, either within or outside of government, can be comfortable with the year-in, year-out rate of increase in the cost of health care. Obviously, there is concern. It is not a problem unique to our country, but is rather common to all the industrialized countries of the world at this time.

In the United States there are four components or groups that can be distinguished as having contributed substantially to our health care cost problems, and from which solutions must come. Their individual and collective importance warrants a few distinguishing comments.

Dr. Dunn is senior vice president of Government Affairs, Hospital Corporation of America, Nashville.

Presented at the joint annual meeting of the Tennessee Society of Internal Medicine and the Tennessee Region, American College of Physicians, Nashville, Oct. 29, 1981.

Reprint requests to Hospital Corporation of America, P. O. Box 550, Nashville, TN 37202 (Dr. Dunn.)

First, we must consider the source of national health care policy. The principal contributor to the rapidly increasing costs of health care has been and continues to be our federal government. Trapped today in a web of its own creation, represented principally by open-ended Medicare and Medicaid entitlement programs, government grows increasingly more violent in seeking relief from soaring health care costs.

As a result of government's commitment to health care needs, we in this room, along with many other allies, have been working as partners over the last ten years, seeking to deliver quality care and at the same time prevent the federal government from exercising an inherent conflict of interest. As the single largest health care purchaser, government has repeatedly insisted on its rights to control the costs of what it seeks to purchase. This is a very unhealthy conflict of interest. At the same time, we in the hospital industry in particular have noted with growing concern the federal government adhering to a formula of reimbursing for services that encourages inefficiency, choosing to reimburse hospitals at levels substantially less than the reasonable charges those hospitals might otherwise make for their services. Consequently, hospitals have simply transferred to the private purchasers of health care those costs that the government has not been willing to assume.

The second group is a large aggregation of private purchasers of health care services that includes business, industry, Blue Cross-Blue Shield, commercial insurance companies, and labor. These third-party participants have produced health care benefits for so many on such a generous scale that a major imbalance in the normal decision-making process leading to health care services has developed. Labor, for example, has bargained year after year for higher health care benefits for their employees. Business has agreed that, since these benefits are not treated as taxable income to the employee, and since business could make such expenses a pretax deduction, it should go along with labor's demands for increasingly generous health care benefits. Non-union employers followed those examples. Insurance companies, of course, have wanted their part of the action. Their objectives have been to sell those group or individual policies to the consumers of health care or to the employer, mak-

ing a fair profit in return.

Clearly, all these groups have had positive as well as negative influences on this complex mix of developments relating to health care and its costs. Now we see business moving with increasing momentum in another direction. We must note the establishment of local community business coalitions, the first and most sophisticated of which is the Washington Business Group on Health, an outgrowth of the influential Business Round Table. This group represents big business' deep concern for the rising cost of health care and its impact on the corporate bottom line.

The third group, the health care consumer, potentially includes us all. I believe this segment has been underestimated by most of us health care professionals. Few have ever given the patient enough credit, much less the incentive, for being able to make rational economic decisions relative to health care. Surely, the patients have not assumed that responsibility for themselves as a general rule. Rather, the health care consumer has found himself comfortably insulated from the sting of health care costs through the role of the third-party payer. One of my associates at Hospital Corporation of America (HCA) commented at the lunch table recently about his young son, currently living with his mother, since the parents are divorced. Dad received a call from the boy after scrimmage at football saying, "Dad, I have a jammed thumb and Mom is going to take me to the emergency room." Dad said, "Son, go in the kitchen and get some epsom salts, put it in a little warm water, and soak your thumb. It will be better in the morning." Not unexpectedly, Mom insisted on the visit to the hospital emergency room. The boy came away with what he wanted, which was a good looking bandage on his hand, and Mom came away with a \$94 bill for a quick visit to the emergency room, a bill she quickly passed on to Dad for payment under the Employee Health Care Benefit Program. That incident is a simple example of the fact that at least 90% of the American people have some significant potential, through the third party, to be insulated from, and therefore insensitive to, the health care economic equation.

The final group consists of the health care professionals themselves—physicians, hospital managers, and so forth. No segment of our society has been called on with higher expectation that it could deliver than has the health care provider. Insistence on excellent quality service,

demands for immediate access, requests for the latest in technology and full accountability for potential error have all been major components of the complex formula leading to the provision of satisfactory health care services. The physician has, in effect, been in control of both supply and demand, and the hospital has attempted to make the institutional care available, in a rapidly accelerating inflationary economic setting, and in a rapidly accelerating climate of health care expectations.

The results of the interaction of those groups have been, in addition to the finest health care system in the world, health care costs apparently out of control.

I personally believe no group, certainly not any one of the groups to which I have hastily referred, has a remedy for the problem. Solutions, if there are solutions, must be directed toward the rate of increase and the growth of the costs. Solutions are going to be long term rather than short term, or else we are going to jeopardize our great health care capacity. The answer must come through experimentation and cooperation between those groups to which I have referred, since we are not dealing simply with a health care problem. Our challenge is socioeconomic and political.

Under the circumstances, why should I be so optimistic? Let me offer a few sound reasons. First, the professionals in medicine, individually and collectively, are the most technically sophisticated, the most socially responsive, the most economically sensitive, the most physically capable group of people that have ever attempted to meet this nation's health care needs. We have never had a richer supply of health professionals.

Next, our hospitals as a group throughout this country are newer, bigger, better equipped, and better staffed, and they are more adequately dispersed, more innovatively managed, and more acutely aware of their social responsibilities than ever before. Without question, society has reacted to need by producing adequate professional resources.

Additionally, our public officials at all levels are demonstrating a new awareness that the resources of this nation are limited and that government cannot solve all our social questions. They recognize that the time has come to look toward long-term reform of government's commitment to health care and its role as the na-

tion's single largest purchaser. The idea of the marketplace has a reality in health care, and as an alternative to more government regulation has gained substantial momentum with the political leadership. Consequently, we are assured that the current administration and the Congress will soon initiate a national debate on the question of health care costs. They will put a spotlight where it ought to be, on the demand side of the cost equation as it relates to health care.

Also, in the private sector, leaders in business, industry, and labor have expressed their enthusiasm for new and innovative approaches to the provision and utilization of employee health care benefits.

Finally, with consistency, distinguished leaders of various national health-related professional organizations and trade associations have pledged their energies to the end that we continue to support the education of future generations of health practitioners and the ongoing necessary clinical research.

I take comfort from those facts and I hope they demonstrate reasons for my optimism. At the same time, there is no room for complacency. The topics chosen for your meeting suggest that it is your concern and interest that will be required to help solve the problem. It will take a well-coordinated series of efforts by many groups.

I can assure you from one very significant segment of the hospital industry that we have the very same commitment that you demonstrate. We recognize the tradition of excellence that characterizes the health care dispensed in this nation, and we are determined to help preserve it.

We also recognize the importance of carefully monitoring the steps being taken by government and of being prepared to provide constructive input to the legislative and regulatory decision-making processes. Consequently, we will become fully involved in the pro-competition concepts in health care that will increasingly be discussed in the decade of the 1980s. There are many who have viewed pro-competition legislative concepts as vehicles to be ridden primarily by self-serving politicians in the years ahead, even as the vehicle for the 1970s was national health insurance. I disagree with that cynical view, and feel there are some very interesting and significant aspects of pro-competition legislation that must be given every consideration.

For example, the proposal to eventually phase out Medicare and Medicaid in favor of a system

where those qualified would receive a government voucher to be used to purchase some sort of private health indemnity is a reasonable concept. It is getting a big push from thoughtful congressmen. The congressional leaders who are now proposing ideas developed by the Richard Egdahls and the Alain Enthovens of the world are sincere and confident of their proposals. They are convinced the private sector and free enterprise are the necessary resources this country must rely on in dealing with the problem of health care costs.

Proponents of the voucher say it would get government out of the insurance business, a very appealing prospect to many people. Secondly, it is believed the voucher would make Medicare and Medicaid expenditures predictable for the first time. Currently, these programs are literally open ended and out of control. Finally, proponents maintain the voucher would make the beneficiary more cost conscious. There would be incentives to take that voucher and translate it into a more economical insurance policy, and then perhaps more incentives for judicious health care decisions.

Another part of the pro-competition package that is credible would establish a maximum amount an employer could contribute to an employee health benefit plan as non-taxable income to the employee. Employers would be required to offer a selection of traditional health insurance plans and perhaps alternatives such as HMOs or IPAs. Supporters of that approach believe there would be a lower utilization of health services among employees who chose traditional insurance coverage because they would be likely to select coverage with high cost-sharing and therefore lower up-front premiums. An added feature would permit the employee to share in premium savings designated non-taxable income.

Those, then, are two aspects of the pro-competition approach now taking form in our national Congress. I think they are important and worthy of our consideration. I hope we, as professionals, will influence their evolution.

Now, let me briefly share comments about the pro-competition approach from the hospital side, for you surely need to know what is happening in a rapidly changing industry.

Few in health care would deny that the expression "medical marketplace" has increasing

significance. That is so because health care is an immense business—\$275 billion a year. Because of the magnitude of the economics, it is very clear that change will have dramatic impact upon the hospital. New and innovative ways to finance and deliver health services will continue to be debated and demonstrated. They will not only be developed but they will be practiced. Consumers of health care will increasingly be subjected to education and preventive measures, most of which will come under the auspices of the local hospital.

Medical educators throughout the nation have reached a degree of cost consciousness never before acknowledged, and this influential group is determined to bring cost containment to the forefront in the process of educating future generations of medical practitioners. Such actions will directly affect the future of the hospital.

Once a fragmented number of isolated, free-standing facilities, the hospitals of our nation are undergoing rapid change through the consolidation of single units into large, multi-facility corporations and systems. If the history of our business and industrial evolution in America is any kind of a valid blueprint for the future, such consolidation of hospitals will continue and accelerate as new forces and new ideas stressing competition and conservation are put into place.

Since the late 1960s, hospital management companies have continued to carve out an increasingly important position in the entire hospital complex. Over the past few years in particular, public and private concerns for costs have created an environment that stimulated and challenged the instincts of those with an entrepreneurial orientation and also a health care orientation. It is understandable that the profit motive has created criticism, controversy, and misunderstanding. However, it is equally understandable that increasing familiarity with the concept and an awareness of its success is generating much support.

In fact, many people believe that the entry of hospital management companies has been a necessary stimulus in an industry that has often been appropriately characterized as fragmented, wasteful, and undercapitalized. At any rate, there is universal agreement that costs, productivity, and capital rank high on the list of the concerns of those who bear responsibility for health care in this country. It seems quite natural, therefore, that in this age of management expertise and in-

formation manipulation, hospitals, as well as other providers of health care, ought to apply the techniques that have been so beneficial to other aspects of business and industry to the delivery of health care.

Today, there are approximately 36 hospital management groups involving nearly 1,000 hospitals and more than 100,000 beds in the United States. These groups are building on a time-honored national tradition of demonstrating high ethical concern for the person in need of health care.

It is difficult to predict the future, but I think it is accurate to say that, more than at any other time in their history, hospitals will be acting and reacting to change in a rapidly increasing climate of severe economic pressures.

We can be sure that those who are most sensitive to the decisions the hospital industry make—those in government, business and labor—will be doing their utmost to influence our future.

Our ability to preserve the system as we know it, to extend it, and to positively influence the problem of costs, will depend on how well we in health care jointly respond to our opportunities. We must develop strategies that combine the element of price consciousness and desire for deregulation with the opportunity to be masters of our own fate.

Hospital Corporation of America anticipates that its growth will continue in an increasingly competitive environment. We expect to expand through construction and acquisition of additional hospitals. We will expand through management of hospitals for other owners and by vertical integration of innovative health services at the local level.

Our individual hospitals will work more cooperatively among themselves within our system

to develop and to solidify a patient referral system as a number of our hospitals become aligned within specific geographic areas. We will become more sensitive as a company to opportunities for marketing our network of hospitals and their services to insurance companies and other group purchasers. We expect to be negotiating provider contracts with insurance companies and other large purchasers as we move away from cost-based reimbursement and its perverse incentives.

We believe access to capital is one of the critical factors in an increasingly competitive environment. We expect more formal relationships between physicians and hospitals than currently exist, as well as between physicians and purchasers of health services. We think HMOs will play substantially larger roles in such relationships. There will continue to be consolidations within the hospital industry and these will be stimulated through advantages of access to capital.

I conclude by stressing my optimism. I believe we have the potential to meet all of the challenges the health care professions face. As people of good will, I believe our potential is irresistible. We have chosen health care as our business and we are automatically clothed with public interest and responsibility as a result.

As health care professionals we will find ourselves engaging a variety of cooperative relationships acting in concert to counterbalance the enormous political power of government. I think we will succeed to the degree that we are able by our performance to persuade the American people that we are guided by the same responsible codes and the same ethical commitments and respect for values that we always look for in those with whom we deal.

Approximately 25% of hospital costs in New York State are attributable to meeting government regulatory requirements. About 115 million man-hours are needed to meet these requirements at an annual cost of \$1,100,000,000.

New Directions in Health Care Financing

A Physician's Comment

T. REGINALD HARRIS, M.D.

New directions in health care financing is an appropriate subject for consideration by all physicians. The physician's role and responsibility in health care costs is receiving increasing attention, as the concept of the physician as "The Purchasing Agent" for both patients and the health care delivery system has been emphasized by some as both the cause and the cure for increasing health care costs.

Among the questions physicians are often asked are: How can we insure that the physician will accept seriously his responsibility for the cost to individuals *and* society for the care he delivers? How does such new responsibility affect his practice and the quality of care he delivers? Can one justify myriads of expensive tests out of custom or habit or for legal reasons? Is it worthwhile or humane to prolong the terminal stages of illness at great expense to the patient, his family, and society? Is high-priced technology really as beneficial as it seems? Can we find new ways of practicing high quality care that costs less? My answers to those questions include, I don't know, yes, no, and maybe. Using recent articles in just one journal—the *New England Journal of Medicine*—compelling arguments can be made for any of my four answers to any of the questions asked. Lengthy statements and even books are being written on these topics. Point and counterpoint can be made during hours and days of discussion of the complex issues involved.

In addition to those above, a variety of other questions, statements, and positions can be identified. A cursory list of recent additions include:

- Reports that identify the overuse of diagnostic laboratory tests, and estimate that major reductions in health care expenditures would result from correcting inappropriate patterns of test ordering.
- The statement that, compared with general practitioners, pediatricians and internists use more diagnostic procedures such as blood counts and throat cultures, and it is said, for example, that the cost would have been \$7.9 million more annually if general practitioners ordered throat cultures as pediatricians do. Similarly, the "savings" because of white blood counts not performed reports would have been \$9.7 million.
- Internists order more electrocardiograms, chest x-rays, and laboratory tests than general practitioners and thus contribute to the "increased cost" of medical care.
- A common cost containment proposal is a substitution of ambulatory for inpatient care, with great enthusiasm for its savings but with little real documentation of true savings realized thus far.

I will not attempt to elaborate on, justify, or defend any of these statements here, but you recognize them all and have heard others of a similar nature.

Enthoven, with his "Consumer-Choice Health Plan," would reform the health care system by altering tax laws affecting deductibility of health insurance premiums, require that a choice of three different health insurance plans be offered by employers, and rely heavily on coinsurance and deductibles in health care. His interesting and challenging book has considerable support by some in medicine, business, and the Congress. Congressman Gephardt has introduced his pro-competition bill, and you will continue to hear

Dr. Harris is secretary-treasurer of the American Society of Internal Medicine.

Presented at the joint annual meeting of the Tennessee Society of Internal Medicine and the Tennessee Region, American College of Physicians, Nashville, Oct. 29, 1981.

Reprint requests to 808 Schenck St., Shelby, NC 28150 (Dr. Harris).

about pro-competition. Eli Ginzberg, on the other hand, finds Enthoven's proposal unacceptable and unworkable, and concludes that it would not lead to a substantial increase in cost-effective delivery systems, nor would it slow the expansion of health care costs in a manner that would be acceptable to the American people. He believes that a quick and easy fix is not possible, and gives some persuasive arguments about the difficulty of change when the public is generally satisfied with its regular source of health care and considers convenience, quality, and reliability important, and frequently more important, than the cost of health care.

Another approach includes cost containment through risk sharing by physicians. A multitude of HMOs, IPAs, and now "cost sharing" Blue Cross/Blue Shield plans are offered with considerable fanfare, but with somewhat less attention to the details of the multiple failures of many of them. The highly publicized Safe-Co Plan on the West Coast has received much less attention in its recent failure than it received when it promised so much in cost containment.

Aggressive closure of excess hospital beds is supported at the same time that statements are made by others that quality of care in the inner cities and in rural areas would decrease.

We hear that the present cost of the dialysis program is approximately \$28,000 per patient per year and that 70,000 patients will be receiving care by 1990. We are urged by one voice to "ration" our use of dialysis for the terminally ill, by another to make such therapy more available by increasing home rather than center use, and by a third to encourage "for profit" units where cost is reportedly lower than for "nonprofit" units.

Walter McNerney, of Blue Cross/Blue Shield fame, writes, "The answer to the perplexing problems of cost containment in the 1980s must be sought in the combination of forces of regulation, competition, volunteerism, and innovation." This seems to have something for everyone; and then he urges physicians to accept the negotiated fee schedules!

We have been publicly chastised by Dr. Arthur Relman as he urges us to avoid the non-professionalism of the new medical-industrial complex, while others urge us to undergo what sounds rather like stock-market speculation—with comments about "risk sharing" in the treatment of seriously ill patients.

This subject of health care financing needs more discussion, and much more in the way of

real data is needed. There is not even a consensus on what should go and what should stay in our present system, and certainly no solution or panacea is presently visible. By our discussions we are now only beginning to understand the health care cost world.

All of you have been taken to task both individually and collectively for your contributions to our present health care financing problems. Rather than adding to the admonishments, I prefer to comment briefly on some of those already identified.

We have all heard the "purchasing agent" arguments many times. It usually runs along these lines:

- Medical care costs—in and of themselves—are intrinsically bad. Something must be done about health care expenses, which now absorb some 10.2% of the nation's gross national product (GNP).
- The physician has primary control over medical costs by decisions about the appropriate tests, whether the patient should be hospitalized, etc.
- Physicians must be made more aware of costs, and any new directions at reducing expenses must be targeted toward him.
- Total medical care costs in this country will be reduced only if the nation's 350,000 physicians work as individuals to reduce the expenses they generate.

It certainly would be foolhardy in this day and age to suggest that anyone continue to use resources as though they were unlimited. Prime interest rates have hovered around 20% for the past two years. Housing costs have skyrocketed to the point where many young families have had to delay purchasing a house. Food costs go up with each trip to the local supermarket. For the first time, young adults are concerned that they may not achieve a higher standard of living than their parents did. I certainly do not need to tell you that the pie is shrinking across the board and we may have to lower our expectations about what we and the next generation will achieve.

I do think that the time has come for a serious reevaluation of the "physician as purchasing agent" argument. To do this, I should like to examine the argument's component parts:

First, the contention that it is undesirable to devote a high proportion of the nation's GNP to medical care costs. Between the enactment of Medicare in 1965 and 1978, national health care

expenditures rose at a compounded annual rate of 12.2% while the GNP increased 9%. During the same period, public financing of medical costs rose from 25% to 41%. Personal health care expenses per person increased from \$188 in 1965 to \$950 in 1980.

In spite of those figures, debate still continues about whether we do, in fact, have a cost problem. Robert Derzon, former administrator of the Health Care Financing Administration, and now a Washington, D.C. consultant, has suggested that part of the debate is caused by the fact that the health care delivery system is substantially private but its funding is public. He further argues that there is a cost problem if we must sacrifice other important public services—national defense, aid to education, bioscientific and high energy research, police and fire protection, etc.—to guarantee health care entitlements. Others respond to this argument with “Who *knows* what the right health care expenditures percentage of GNP should be? And furthermore, what right do bureaucrats have to impose their views?”

Other recent studies also point to the continuing debate about the significance of health care costs. In a recent survey, 80% of the responding physicians noted that their predominant concern about health care delivery was *cost*. Sixty percent of their patients, however, rated cost as fourth or fifth on a list of potential items of concern.

The second part of the “physician as purchasing agent” issue is the crux of the matter. This is the contention that the physician shares the major responsibility for medical care costs because of his control of the “system.” The doctor decides—according to this reasoning—what tests to order. The doctor determines if and when the patient should be hospitalized. The physician determines—the line of thought continues—basically whether the patient is told to take two aspirin and see if the pain disappears or is given a complete neurological workup.

Although there is *some* validity to the statement, I have three major problems with the contention that the physician serves as the patient’s “purchasing agent.” First, it assumes that the patient has willingly abandoned responsibility for his treatment. The provision of high quality medicine is not a unilateral decision and we all know that the most effective management plans are those that actively involve the patient. Indeed,

any physician who outlines a treatment plan without the patient’s involvement in the process is practicing bad medicine.

My second objection to the “physician as purchasing agent” argument centers around the impact of insurance reimbursement on the health care system. According to the standard reasoning, physicians recognize that their insured patients will bear little or no out-of-pocket expense for treatment. From purely medical considerations, therefore, the doctor has no reason to avoid prescribing the most expensive tests and treatment available—even if they are only marginally superior to less expensive care.

The reasoning continues that the physician has the incentive—if he wishes to keep his patients—to recommend the most pleasant and the best equipped hospital, regardless of the cost to the third-party payer.

We all know that negative incentives created by third-party reimbursement mechanisms do exist. Cost-effective medicine is not always possible because third-party payers will not provide reimbursement for the less expensive alternatives. All of our efforts for making doctors more cost conscious may be useless until third parties *also* learn about the alternatives and make the cheaper ones available to their subscribers. In this day and age, however, fewer and fewer patients are hospitalized for tests “because the insurance pays for it.” First of all, in numerous localities peer review mechanisms already in place would not allow it, and secondly, hospitalization is usually initiated because the physician recognizes that his primary responsibility is to the patient, and not to the patient’s insurance company. In another effort to change incentives, a major effort of the American Society of Internal Medicine during the past 18 months has been directed towards increasing the proportion of third-party reimbursement for the internist’s cognitive services rather than continuing the emphasis on reimbursement for procedural services.

This brings me to my third objection. With all of the talk about the “physician as purchasing agent,” we must not forget about the “physician as physician.” What I mean is this. Beyond the physician’s responsibility to efficiently utilize the resources of society, beyond the physician’s responsibility to hold down costs, there lies one paramount responsibility: his professional and moral obligation to render the best possible care to his patients. This does not occur in a vacuum, and factors such as cost clearly come into play,

but we must be aware that the discretion of the individual practitioner is necessarily circumscribed by his ultimate duty to his patient.

The third argument deals with the physician's cost-awareness and contends that any new directions at reducing expenses must be targeted towards him. Physicians already are aware of cost factors. As noted earlier, 80% of the respondents in a recent survey rated medical care costs as their primary concern. Numerous cost containment projects—ranging from shared hospital services to additional emphasis on outpatient testing—have been unveiled with a great deal of fanfare.

I am not suggesting that these projects—and I have one or two favorites of my own—are without merit. I am suggesting that they point to the fact that many of the sources of unnecessary cost are institutional, and are not in the hands of the individual physician. Many of these projects aim at eliminating institutional waste and inefficiency that a modern business would consider unthinkable. The rise of “for profit” hospitals and hospital corporations has spurred a new awareness of the applicability of good business practices to management of hospitals and other health care institutions. There is still much that could be done in this respect.

The argument that emphasizes increasing the physician's cost-awareness can also be criticized for ignoring a crucial component of the equation—the patient. The rate of cardiovascular disease in this country is declining, due partially to technological innovations and partially to more attention to healthier life-styles. People are trying to reduce the amount of unsaturated fats in their diets, increase their exercise, and moderate their alcohol and tobacco consumption. Some of us are more successful at changing detrimental life-styles than others, but I suspect that this perceptible change will continue to affect medical care costs more rapidly than has been previously recognized. We are doomed to failure without active patient involvement. A considerable amount of work needs to be done in the area of patient education, and I am convinced that this offers one of the brightest hopes of containing medical care costs in the future.

The fourth aspect of the “purchasing agent” reasoning is that the nation's aggregate medical care costs will decline only if some 350,000 doctors work as individuals to reduce their expenses. According to this line of reasoning, the physician has a so-

cial responsibility to contain his medical care expenses, and each drop in the bucket will eventually create a bucket-full. Several years ago, then HEW Secretary Joseph Califano created some controversy by stating that each doctor generated approximately \$250,000 annually in medical expenses. Although thought provoking, this argument makes little sense when it is examined logically, since its corollary is that disease will disappear if there are no physicians to treat it.

We are all increasingly aware of the limited resources available to us and no one should squander his assets unwisely. However, there are two fallacies in the current line of thought. First, it is often unrealistically assumed that medical expenses will decline. This is unlikely. Most of the “cost-reduction” efforts have been directed at containing costs or controlling the rate of increase rather than reducing them. And secondly, most of the proposed solutions—including the pro-competition proposals—involve a transfer, rather than a reduction.

The point of these proposals is to give consumers a stake in using health care resources conservatively. This works by shifting some of the monetary burden off employers and onto the individual. This whole concept is predicated upon shifting the burden of medical expenses. It is hoped that this shift will have a subsidiary effect of holding down the utilization of health care resources. This remains to be seen.

Another example is the recent effort by the Reagan administration to limit the federal government's Medicare and Medicaid bill. This will have a predictable effect upon the costs of health care borne by the states and the private sector. It is not a move to conserve, but rather a redistribution of the burden. In addition to redistribution to states, counties, cities, and public agencies, there promises to be a significant financial impact on both physicians and their patients.

Although I have serious reservations about the “physician as a purchasing agent” reasoning, physicians *can* affect medical care costs on both an individual and collective basis.


- On an individual basis, the most “cost-effective” medical care is high quality medicine in which the patient is actively involved. Certainly, the costs of the various options should be considered, but they should not be the paramount issue.
- Secondly, physicians as individuals need to pay more attention to educating their pa-

tients about detrimental life-styles. Patient education is one of the most frustrating—and potentially most rewarding—of our functions. Even though patients frequently ignore advice and dispose of your recommendations without thought, encouraging them to adopt healthier life-styles may have more pay-offs in the long run than sporadic “cost containment” projects directed towards specific problems.

Collectively, we must continue to work to remove the negative incentives created by the federal government and other third parties towards ineffective medical care. We must insist that our hospitals be run as efficiently as modern business practices permit. We must not forget, however, that much of the debate about cost containment really reflects a deeper social issue that must be

resolved rather than attacking the problem piecemeal.

I am not suggesting that there is no “medical care cost problem.” The recent congressional debate over budget recisions has focused national debate on the proportion of national funds we spent on medicine, defense, education and other socially valued items. What I am recommending, however, is that there should be clear consensus as to what the problem actually is before we implement any massive changes.

Society must determine its priorities and decide how much of its assets should be devoted to medical care. It is the old “guns or butter” argument, and unfortunately, we simply do not have enough resources to provide for everything. Although physicians must participate in the debate, they certainly cannot act as final arbiters. Nor can they bear sole responsibility for the cost problems we are now facing. 

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

The Hospital—Mistake or Mystique?

JOHN H. GRISCOM, M.D.

The word "hospital" comes from the Latin word "hospitium," which means a house or institution for guests

Although some form of hospital existed as far back as 500 BC, the physicians seemed to demonstrate an uncanny sense of wisdom by treating most of their patients at home. It was the poor and the victims of contagious diseases that flocked to the hospitals, which were often dirty, dark, and overcrowded.

By the 19th century, the situation began to change. Florence Nightingale organized nursing and made it a dignified profession, while Louis Pasteur and Lord Lister developed and applied the principles of antisepsis to make the hospital and surgery an increasingly safe endeavor.

The physicians now began bringing their private patients into the hospital. The housecall began its slow retreat into the annals of history as a new concept of care evolved. The modern day hospital has necessarily traded simplicity for a high grade technology, a maximum of charity for at least a minimum of profit, a social conscience with few rules for a social mandate with many regulations, and internal self-control for multiple external pressures. She is kept so busy with cost containment, length of stay, number of beds, and justification for new pieces of equipment, that it is possible for her to lose sight of a part of her mission. If the forest is the hospital, certainly the trees are the patients.

The hospital for the physician is the arena in which he performs his finest art. It is here the doctor's diagnostic skills meet their greatest challenge; it is here the surgeon shares the miracles of his accomplishments with the technology of a modern era, and it is here that we often de-

termine not only how well life will be lived, but whether it will be lived or not.

If this be so, then why should the hospital not be the setting where we bring our richest traditions, our most refined intellect, and our deepest compassion? We have here all the advantages of our profession—good nurses and technicians, radiology and laboratory facilities, easy consultations, and equally important, time to spend in examination and reflective thought on the best course to follow.

We are comfortable in the hospital, for we have a certain dominion over it. But what of our guests, the patients, who are invited by chance and circumstance, not by choice. They must see it as a place that is happier to leave than to enter. For them the hospital is forbidding and a bit austere, for it is a part of the world over which they have limited understanding and even less control.

As a patient, you see in this building knowledge, skill, compassion, and hope. You seek them all—perhaps in no particular order—but, deep down, you wonder if you will receive each in a measure sufficient to meet your needs. You are, however, the reason this hospital was built—you and your morbidity, they and their humanity—brought together on this common ground.

The word "mystique" means the special esoteric skill essential in a calling or activity.

I suggest there is a mystique to a hospital—an air that can be a tolerable blend of the known and the unknown. It is ideally an intangible feeling of quiet confidence and demeanor generated from the physician in charge all the way down the echelon of care presumably to those who might feel their role is menial and unimportant. I assure you that in the eyes of the patient there are no unimportant people in the hospital environs. His confidence is tenuous at best, for it has been

Reprint requests to 420 Medical Arts Bldg., Nashville, TN 37212 (Dr. Griscom).

fabricated from many sources, including unfortunately "the anecdotal experience" and the best selling novel that paints us as anything but the saints of a lost art.

We tend to forget how importantly our patient views us. He wants us to be heroic figures. He is willing to accept our intelligence, our seeming affluence, and our busyness as products of long study, just reward, and dedication. He does not want to be disappointed. He becomes distressed if he sees any cracks in the protective wall he has built, cracks that might make him doubt that we are paragons of intelligence or virtue. We are, however, but a part of what the patient subconsciously seeks, for he wishes to think that everyone else is equally qualified to perform their assigned roles effectively. The cascade of care is so structured that the physician may spend 10 to 20 minutes daily after the first day with the patient while the staff executes his plans during the remaining 1,420 minutes. Little wonder that the patient becomes ever conscious of a transferred dependence on the nurses and the technical help as his stay lengthens.

It is difficult to conceive of the number of ways we are judged. The mystique as viewed by a given patient is a sum total of all events.

It is not just the concerned history-taking and the laying on of the educated hand for the physical examination that in itself is remarkably therapeutic. It goes as far as the correct, ordered items on the food tray, as far as the number of times required to find the ever-elusive vein, as far as the way the maid empties the trash. It goes as far as the time interval between a request to the nurse and the time it takes her to provide the needed item; the noise level of the hall, especially at night; as far as the subtle transmission of hostility from any of us that is perceived by the demanding or discerning patient who finds himself in these undesired and unfamiliar surroundings.

What seems trivial to us may assume significant proportions in the minds of our patients. If one area is lacking, perhaps others are too. If they see one error, how many others are there? They fear what they know, and fear worse what they do not know. It even frightens us sometimes, but we are not the ones being asked to be brave and stoic. I assure you it is easier to give care than to receive it.

You order the pill, you don't swallow it!

You give advice, but you don't have to follow it!

You go home, but they stay here!

A mystique, an air, a pervading presence; an immeasurable quality that even the government or JCAH have not yet demanded as such. But it is real and it is there. All the committees and all the regulations seek a utopian excellence that can be easily lost in the burdens of implementation and the time spent in the committee room far removed from the bedside. We must not be persuaded that we have done our duty just because Medicare continues to pay its bills and JCAH grants us a two-year approval.

Mystique or Mistake? Will we be too easily self-satisfied by low infection rates, few blood transfusion reactions, reduced operative mortality, and a high occupancy rate? Meanwhile, the patient can easily be forgotten as a statistic to satisfy our well-meaning ventures. He needs the quiet air of confidence that only we as a team can bring. It requires our time to answer his questions, a willingness to talk to the family, a sense of concern for him as a person, and to maintain at all times his dignity and sense of self-worth.

It requires everyone to walk softly and speak gently, for this is one of Heaven's special places where there is a sometime answer for tragedy and an all-time sense of compassion.

I recall a comic cartoon years ago that showed a doctors' parking lot at the hospital that was filled with only Cadillacs and Lincolns. Into the lot drove a lonely Ford. As the physician emerged, the security guard tapped him on the shoulder and said, "Doctor, they've asked me to speak to you about your car."

We are expected to be the Cadillacs and Lincolns of the ward—we must look, act, and perform the part. Otherwise, we may find the "insecurity guard" of our patient tapping us on the shoulder, either in his own mind or in actuality saying, "Doctor, there is something that doesn't fit with my concept of the hospital." This expectation of excellence does not stop at the physician level, but drifts down the echelon of care. The quiet waters of an assumed confidence are rippled ever so little, but it can grow in one's imagination into a wave of unfortunate even if unfounded mistrust.

The halls of the hospital are not as simple as they used to be. Moving up and down the corridors now are not only doctors and nurses, but many important paramedical personnel, including physician assistants, dieticians, respiratory

(Continued on page 472)

Inroads

CARL COOPER, JR., M.D.

One of the more popular topics encountered during conversations with fellow physicians is the problem of "inroads" into the practice of medicine. Practically every specialty has, or soon will have, a confrontation with health groups seeking the right to practice medicine. Over the years of my experience with the General Assembly, we have encountered nurses, podiatrists, psychologists, pharmacists, physician assistants, physical therapists, optometrists, chiropractors, x-ray and lab technicians, all seeking a piece of the M.D. action.

Physicians generally agree that persons practicing the art of medicine should attend and graduate from medical schools. Additionally, most of us agree that the above-mentioned professionals have limited training and should be restricted to those activities for which they were trained. Ironically, physicians created most of the above-named groups to assist in areas which did not require the full attention of the physician once he made a diagnosis and treatment was begun.

With the support of bureaucrats, misinformed politicians and the benign neglect of many physicians, health groups utilizing grass-roots politics have turned the medical-health world upside down. These groups have bypassed the historical prerequisites of education, training and experience and have attempted, through legislative fiat, to enter the heretofore limited world of medicine. The real loser in this travesty is the general public, which perceives licensure by governmental bodies as a mark of approval guaranteeing quality of care.

Medicine as we know it is facing a crisis of

immense proportions. Historically, we have been of one voice and a staunch defender of quality health care delivery. In the past ten years we have seen the maintenance of individual interests by specialty societies to the detriment of the profession as a whole. At the same time, some physicians have ignored or refused support to an individual specialty society in legislative matters simply because the bill in question had no effect upon their specialty or practice. Whenever a section of medicine loses, it chips away at the fabric of quality care and the public becomes the real loser.

For every problem there is a solution. The solution to this problem is very simple. Our first step on the road to resolving this problem is to recognize and understand the laws and government by which we operate. The practice of medicine and all other professions comes under the purview, discretion and the direction of the Kentucky General Assembly. The General Assembly, made up of 138 distinct and different individuals representing all counties and cities in Kentucky, determines the scope of your practice and the freedom with which you pursue it. We have been led to believe that the right to practice medicine is sacred and removed from the political arena. NOT SO! The Medical Practice Act and all other practice acts are products of the General Assembly and operate under its jurisdiction.


Politicians, despite their grandiose statements, understand one simple reality, that being the polls. The late Senator Everett Dirksen once said, "Politicians have three major goals—Get elected; get re-elected; don't get mad, get even." If we are to achieve any semblance of success in the legislative arena, we must get involved at the grass-roots level. Secondly, we must operate as a team and present a united front to the legisla-

Dr. Cooper is chairman of the State Legislative Activities Committee of the Kentucky Medical Association.

Reproduced with permission from the *Journal of the Kentucky Medical Association* (80:73-74, 1982).

ture. If legislators and other groups perceive a split in medicine, they will quickly capitalize upon these differences to "divide and conquer." Thirdly, we must be flexible and not restrict ourselves to one point of view. Very rarely is any legislation passed in its original form. Additionally, we must recognize our representatives for what they are: politicians. Each politician has a broad constituency made up of varying interests. Each of these special-interest groups has their own "axe to grind." To paraphrase an old saying,

"Good legislation is in the eye of the beholder," and if you remember this basic tenet, you know how the game is played.

If we are to be successful, we must have your support and input and rely on each of you to make your views known to the representative and senator from your district. Be informed, be interested and be active with your legislator. Your support can mean the difference and can prevent "inroads" into quality care and protect the safety and health of our people. 

The Hospital—Mistake or Mystique? . . .

(Continued from page 470)

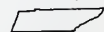
therapists, physiotherapists, and social service workers. The mystique becomes more subject to error as more and more of us participate in it.

And do not discount the government that stalks our halls as a dubious intruder into our environs. Through a host of regulations—some good and some bad, and all expensive—they attempt to insure quality and limit quantity. What the government calls duplication of effort is often an attempt at the duplication of excellence.

Television has taken the hospital into every home and the popular novel has attempted to write our autobiography. Writers may have convinced the patient our ground is not sacred, but they have not changed his hopes that these walls do indeed contain hallowed ground. For us, familiarity can breed an element of contempt or at least a numbed appreciation for the nature of our mission and the place in which we carry it out. The patient, however, does not wish to think we are anything less than a miracle worker who can return the mind and body to a state of happy coexistence. For him the hospital remains as the instrument through which we effect our cure.

I would remind each of us of the nobility of our calling. We have an obligation not just to our defined duties, but also to those I have conceptualized. Although we are the captains of the ship, no ship is better than its crew. The mystique of the hospital becomes a shared one, but we must generate and perpetuate the necessary environment that by example becomes the responsibility of everyone that works there.

We must not confuse self-esteem with self-righteousness, for in the former is a part of our mystique, while the latter defaults our basic obligations to the ordinary but essential emotional needs of our patients. There is a special impetus to healing when the pride in our product is translated with sensitivity to our guests. Just as loyalty and patriotism cannot be legislated, a mystique cannot be mandated. It becomes, however, a pearl of great price when together we see its value as well as its possibility.

Mistake or Mystique? The choice, fortunately, is ours. 

420 Medical Arts Bldg.
Nashville, TN 37212

Bone Metastases: Diagnosis and Management

DAVID H. JOHNSON, M.D., and F. ANTHONY GRECO, M.D.

Introduction

Although primary bone tumors are rare, metastatic tumors involving the skeleton are fairly common. About 60% (range 18% to 70%) of cancer patients have osseous metastases identified at autopsy, but only about 30% will be clinically obvious during life.¹⁻⁴ Although metastatic bone disease may arise by invasion from contiguous primary or secondary tumors, this is unusual because the periosteum appears to form an effective barrier to metastatic disease. More commonly, bone metastases are hematogenous and develop almost exclusively from within the sinuoids of the red bone marrow. Once established, tumor cells may spread through the marrow of compact bones, surround trabeculae, and subsequently invade the cortex. Direct extension from within the marrow into cartilage or periosteum is unusual.² Frequent sites of osseous metastasis include the vertebral bodies, pelvic bones, ribs, proximal ends of long bones, sternum, and cranium.¹⁻³ The reason metastases have a propensity for these sites is not clear, since the volume of blood flow to these areas does not correlate with the frequency of involvement.

In general, bony metastases create problems for the patient in four ways: by causing pain; by weakening and destroying bone, often leading to pathologic fracture and secondary loss of function; by interfering with surrounding structures (e.g., the spinal cord, peripheral nerves, muscles or ligaments); and/or by adversely affecting the normal hematopoietic system, leading to limited bone marrow reserve, with granulocytopenia, thrombocytopenia, and anemia.^{1,4}

The exact incidence of bony metastases is difficult to determine, but the oncology literature

suggests that skeletal lesions in men occur most commonly from lung, prostate, gastrointestinal, and thyroid malignancies in decreasing order of frequency.¹⁻⁴ In women the most common primary cancers are, in decreasing order of frequency, breast, lung, gastrointestinal and thyroid cancer.^{1,4} While these are the most common cancers associated with skeletal involvement, the highest incidence of bony metastases do not necessarily occur with these particular cancers. For example, 25% of patients with hypernephroma will experience bony metastases,^{2,5} but, because of the relative rarity of this disease, osseous metastases due to hypernephroma account for only 3% of skeletal lesions encountered in clinical practice.⁵ On the other hand, osseous metastases are relatively uncommon in patients with gastrointestinal malignancies, occurring in only 5% of patients. Nevertheless, 10% of all metastases to bone occur in patients with cancer of the gastrointestinal tract due to the overall greater prevalence of this neoplasm.⁵ Breast and prostate cancers account for 60% of all bony metastases and lung cancers 25%.^{1,2,4,5}

Osseous metastases can occur simultaneously with the primary tumor or later during the course of treatment. On occasion, no primary tumor is identified.² The principal symptom is pain, which is most commonly caused by periosteal stretching, microfractures, and hemorrhage. Pain often begins as a mild, intermittent ache and is frequently intensified by activity.^{1,4} It gradually becomes more severe and prolonged and classically is worse at night. Percussion tenderness at the site of involvement is a highly reliable clinical sign.^{1,2} Like the pain of arthritis, metastatic bone pain may respond to changes of barometric pressure.⁴ For all these reasons it is not uncommon to encounter a patient whose pain was initially diagnosed as "arthritis" but who was later found to have a malignancy. An important aspect of

From the Division of Oncology, Department of Medicine, Vanderbilt University Medical Center, Nashville, TN 37232.

bone pain due to metastatic disease is its constancy. Any *sudden* change in a chronic pain should heighten one's suspicion of the possibility of a pathologic fracture.^{1,4} Although localized pain in a patient with a known malignancy is often due to tumor, benign processes may also account for the pain (e.g., arthritis, Paget's disease, osteomyelitis). Therefore, all severe bone pain in a patient with cancer should be carefully evaluated and not presumed to be due to tumor. Likewise, the presence of an isolated bony lesion on x-ray in a patient with malignancy does not necessarily mean the patient has a skeletal metastasis. Biopsy may occasionally be needed to confirm or rule out a malignant process.^{1,3}

It is important to attempt to define the exact mechanism of pain in each individual patient. If the tumor causes pain by periosteal stretching, shrinkage of the tumor by radiation or chemotherapy would be expected to provide prompt relief. On the other hand, if pain is due to compression of surrounding nerve structures due to the loss of structural integrity, antineoplastic therapy alone may not provide pain relief and surgery may be required.¹⁻⁴

A careful physical examination is mandatory in all patients with suspected bone lesions, with particular attention given to range of motion of joints, strength of muscle groups, and coordination, accompanied by a complete neurologic examination. Auscultation over a suspected bony metastasis may prove fruitful, as a venous hum has been described with secondary lesions of hypernephroma and thyroid carcinoma.^{1,2,5}

Radiologic Evaluation

The radiologic evaluation of patients with suspected bone metastases should include a standard plain roentgenographic film and a radionuclide bone scan. On plain films an osseous metastasis may be osteolytic, osteoblastic, or a combination of both. Before changes in density can be appreciated on routine radiographs, a 30% to 50% change in bone mineralization must occur. Even with changes of this magnitude lesions smaller than 1 cm often go undetected.⁶ While abnormalities of serum alkaline phosphatase, urine hydroxyproline excretion, and serum acid phosphatase are useful in evaluating patients with suspected bone lesions, these tests are less reliable than radiologic studies.³

Osteoblastic and osteolytic lesions are not only radiographically distinct but also have different clinical manifestations. For example, an osteo-

blastic lesion causes pain less frequently than an osteolytic lesion, probably because the former is associated with maintenance of the bony supporting structure, thereby preventing expansion of the periosteum.^{1,3} Pathologic fractures are also seen less commonly with osteoblastic lesions, a fact not fully understood since the sclerotic bone is not laid down along the lines of mechanical stress. Rather it usually encapsulates the tumor, yielding a mechanically compromised bone which would appear prone to fracture.¹ Osteolytic lesions are seen most commonly with breast, renal, and thyroid cancers.³ Osteoblastic lesions are usually found in association with tumors of the breast, prostate, kidney, and lung, and certain lymphomas.^{3,4} Other tumors which less commonly cause osteoblastic lesions include thyroid, gastrointestinal, and carcinoid tumors.^{1,4} It should be noted that most tumors causing osteoblastic metastases are slow-growing malignancies.

It is well accepted that technetium Tc 99m pyrophosphate bone scans are superior to standard radiographs for detecting osseous metastases.⁶⁻¹¹ In several comparative studies bone scans were positive when standard films were negative in from 10% to 70% of patients.^{6,7,9} In fact, radionuclide scans have been shown to indicate the presence of bone metastases in breast cancer from 3 to 18 months before plain films demonstrated an abnormality.⁹ In rare instances, however, plain roentgenograms may be positive in the presence of a negative scan.^{6,7,9} Although the sensitivity of the radionuclide scan is greater than that of the plain roentgenogram, the latter has greater specificity. Thus, despite the superior sensitivity of bone scanning, monitoring of therapy is best done using standard radiographs, as they more precisely delineate the anatomic contour and healing of the metastatic lesion.^{3,6} Bone scans are less helpful because increased uptake can indicate either progression or regression of disease. Also, with few exceptions, there are no reliable data on the value of sequential scanning for the assessment of response to therapy.⁶

The exact incidence of bone scan abnormalities with specific types of malignancy is also difficult to determine from the literature. In most series the greatest number of abnormal scans tend to occur in patients with breast, lung, and prostate cancer, presumably because these are the most common tumors metastasizing to bone.^{7,12} In general, the distribution of scan abnormalities is similar in all studies, with approximately 60% of lesions occurring in the axial skeleton and 40%

in the appendicular regions. Axial skeletal lesions tend to precede extremity lesions, but in 20% of cases, the reverse is true.¹² Most tumors that metastasize to bone are associated with multiple abnormalities on the bone scan (e.g., the average number of scan abnormalities in breast cancer is 4, lung—8, prostate—9) and therefore a solitary abnormality should signal the possibility of an alternative diagnosis. In a study involving over 1,000 consecutive patients with extraskeletal primary malignancies evaluated by radionuclide scan, Corcoran et al¹³ found solitary bone abnormalities in only 172 patients (15%). These authors were able to establish the etiology of the solitary scan abnormality in 90 patients, 64% of them due to a malignancy and 36% related to benign processes, usually degenerative arthritis. The majority of solitary lesions found in the axial skeleton, skull, or appendages proved to be metastatic, while solitary rib lesions were more commonly due to a benign process. The physical examination was found to be the most useful procedure in evaluating solitary scan abnormalities. Twenty-three of 25 patients who had pain and tenderness in the area delineated by the bone scan were subsequently proven to have metastatic disease, but 33 patients without symptoms also had metastasis as a cause of the scan abnormality, and therefore the lack of symptoms does not exclude the possibility of a tumor.¹³

The following approach has been recommended for evaluating solitary bone scan abnormalities: (1) obtain a standard radiograph of the abnormal area; (2) consider biopsy of areas abnormal by scan but normal by standard radiograph; (3) solitary scan abnormalities of the rib should be viewed with suspicion and biopsied only if therapy hinges on the decision; (4) lastly, physical examination is important, with particular attention given to areas of scan abnormality. An area found to be associated with skeletal pain and tenderness should be viewed as malignant until demonstrated otherwise.

Mall et al¹⁴ presented a so-called unified radiologic approach for the detection of skeletal metastases. These authors recommend using the bone scan as the initial diagnostic test in all patients suspected of having bone metastases except when the primary tumor is multiple myeloma. A "normal" scan should be followed by a plain film of the pelvis, since occasionally the radionuclide isotope activity collected in the bladder obscures an isolated pelvic lesion.¹⁴ Regardless of the tumor type, an area of scan ab-

normality should be x-rayed to confirm its exact nature. Using this approach, one will detect the vast majority of osseous metastases occurring with the most common malignancies.^{1,4,14}

False-negative bone scans do occur in specific situations: (1) multiple myeloma, (2) an extremely anaplastic or rapidly growing tumor, (3) severely debilitated patients with a poor host response, (4) diffuse disease involving the entire skeleton (as is sometimes seen with breast or prostate cancer), (5) pelvic lesions that would be obscured by a high level of radionuclide bladder activity, and (6) previously irradiated lesions.^{8,9,14}

Bone Marrow Evaluation

Occasionally a bone marrow biopsy can make the diagnosis of osseous metastasis. Meinhauser et al¹⁵ have demonstrated that the bone scan and the bone marrow biopsy are discordant in approximately 33% of the cases, i.e., the bone marrow biopsy may be positive even though the scan is negative and vice versa. In this and other studies,¹⁶⁻¹⁹ the best correlation between scans and bone marrow biopsies is seen with prostate and breast carcinoma. For this reason bone marrow biopsy adds little to the diagnostic evaluation of these two malignancies if a bone scan has already been performed. In certain other tumors, e.g., small cell carcinoma of the lung, bone marrow biopsy may be positive even when the bone scan is negative.^{16,20}

Bone marrow involvement may be occasionally predicted by blood chemistries or peripheral blood findings. Chernow et al²¹ have demonstrated four parameters that tend to correlate with bone marrow disease: (1) leukoerythroblastosis, (2) bone pain, (3) an LDH greater than 500 IU/liter, and (4) platelets fewer than 100,000/mm³. Four minor characteristics were also described: (1) positive bone scan, (2) hematocrit less than 30%, (3) uric acid greater than 10%, and (4) BUN greater than 25 mg/dl. A patient having two or more major findings has a very high likelihood of having bone marrow involvement. In fact, these authors recommend performing a bone marrow biopsy to search for occult malignancies when these parameters are found, even in the absence of a suspected primary malignancy.

Therapy

Bone metastases, particularly in weight-bearing bones, frequently require treatment to palliate pain and to prevent fractures. With few ex-

ceptions, curative therapy has not yet been developed and emphasis should be placed on palliative management. Narcotic analgesics can provide pain relief but oversedation and constipation, particularly in elderly patients, are frequent complications. Fortunately, localized radiation therapy is highly effective in relieving bone pain, offering partial or complete relief in 70% to 95% of patients.²²⁻²⁴ The amount of irradiation necessary to achieve palliation is still somewhat controversial. Several studies have retrospectively demonstrated that low-dose irradiation delivered over a few fractions (900 to 2,000 rad in one to five fractions) appears to be as effective and durable in relieving pain as more prolonged irradiation (3,000 to 4,500 rads in 2.5 to 4.5 weeks).²⁴⁻²⁶ Most of these studies demonstrate that the probability of obtaining palliation appears to be slightly better in patients with metastatic breast cancer than in individuals with carcinoma of the kidney or prostate.

With hormonally responsive tumors it is frequently possible to achieve palliation using hormonal manipulation. For example, in patients with breast carcinoma, 50% will have a substantial reduction in bone pain when placed on tamoxifen or DES.²⁷ If estrogen receptor status is known to be positive, there is an even greater likelihood of tumor response. About 75% of patients with metastatic prostate carcinoma will have temporary relief of pain when placed on diethylstilbestrol.³ Obviously, for tumors responsive to chemotherapy, e.g., as breast cancer, small cell lung cancer, and lymphoma, pain relief can be achieved with effective combination chemotherapy.^{20,28}

Bony metastasis, and particularly pathologic fractures, are not always managed aggressively in the patient with malignancy. The median survival following a pathologic fracture ranges from 3.5 to 37 months.^{1,3,4,29,30} Thus, many physicians and surgeons look upon this misfortune as a terminal event, warranting only the simplest of symptomatic care. There are, however, exceptions and each patient should be managed individually, with particular attention to the treatability of the underlying primary tumor. For example, as a group, patients with breast cancer involving the skeleton tend to live longer than individuals with osseous metastases from other common malignancies.²⁸ Consequently, in a patient with metastatic breast cancer an untreated pathologic fracture may leave the patient bedridden, immobilized, and in great pain despite a relatively lengthy life expectancy.

With this knowledge in mind, the principal aims

of orthopedic treatment are relatively obvious. They are (1) pain relief, (2) restoration of mobility, and (3) facility of nursing care.²⁹ While it seems reasonable to avoid major surgery in those patients with an obviously very short life expectancy, the definition of "short" varies among surgeons. Harrington²⁹ has proposed a set of guidelines for determining operability: (1) life expectancy should be estimated as at least two months and the general condition of the patient should be such that he can tolerate major surgery, (2) the procedure to be done must be expected to expedite mobilization of the patient and to facilitate his general care, (3) the quality of the bone proximal and distal to the fracture site must be adequate to support metallic fixation or to secure prosthetic seating.

Ideally, one would want to prevent pathologic fracture, but unfortunately, the natural history of most bony metastases to the long bones is not clear, and consequently the ideal timing of prophylactic surgical intervention is unknown. Metastatic breast cancer has been most extensively studied, but there are few studies from which guidelines can be established.³¹ In a review of nearly 3,000 patients with breast carcinoma, Knutson and Spratt³¹ found a 3.5% incidence of long bone metastases, 90% of which occurred in the femur. Fractures occurred "at some time" in 42% of all femoral metastases. Patients with symptomatic lesions were much more likely than asymptomatic patients to experience a pathologic fracture. The authors also noted that the sudden development of pain in the region of a previously asymptomatic osteolytic lesion frequently presaged the occurrence of a fracture. In view of this information, they recommended the prophylactic nailing of all lytic lesions associated with the pain regardless of lesion size.³¹

More stringent guidelines for the timing of prophylactic surgery in long bone metastatic lesions have been proposed by Parrish and Murray.³⁰ These authors recommend prophylactic intervention if the following characteristics are present: (1) a well-defined lytic lesion larger than 3 cm, (2) 50% or more cortical destruction, or (3) persistent pain in spite of adequate conservative therapy, regardless of the size of the lytic lesion. In the absence of these findings, these authors recommend conservative management using casts or splints.

If deemed necessary, prophylactic fixation of weight-bearing bones is usually best accomplished with intramedullary rods.^{3,32} An attempt

is made to use the largest device a particular bone will accommodate. A variety of rods are available, and the specific choice should be dependent on the preference of the surgeon, the location of the fracture, and to some extent, the general condition of the patient.^{3,4} Patients should receive postoperative irradiation following internal fixation, as continued growth and bone destruction by tumor will eventually weaken the bone in spite of surgical fixation.³

Although large lytic lesions in weight-bearing bones generally require orthopedic correction, there are reports suggesting that radiotherapy alone can be effective in managing some patients. Cheng et al³³ evaluated 424 patients with breast cancer and found that 59 had metastasis involving the long bones, usually the femur. Ninety-seven bone lesions were encountered. All patients were treated with irradiation as the initial treatment modality (usually with 3,000 rad, over 2.5 weeks in ten fractions). Only four pathologic fractures occurred during or after irradiation, and all four occurred in the femoral neck. Only two of the four fractures occurred in patients categorized as "high-risk" (as defined above), and in both cases the fracture occurred during the course of irradiation. Therefore, no patient classified as "high-risk" who completed the planned radiation therapy experienced a pathologic fracture during follow-up averaging 13 months. Additionally, all but eight of the patients with femoral fractures were fully ambulatory and all improved their initial performance status. Contrary to the findings of others,^{30,34} these authors found no correlation between bone metastasis size and the subsequent likelihood of fracture.

It is important to individualize when dealing with patients with a malignancy and metastatic bone disease. With improved surgical, radiologic, and medical management, these patients are not always doomed to a miserable existence, confined to their bed and in pain. Much can often be accomplished in terms of improved function and palliation of pain by considering an orthopedic procedure, irradiation, or other form of therapy for these patients.

REFERENCES

1. Nussbaum H, Allen B, Kagan R, et al: Management of bone metastasis, multidisciplinary approach. *Semin Oncol* 4:93-97, 1977.
2. Hendrickson FR, Sheinkop MB: Management of osseous metastases. *Semin Oncol* 2:399-404, 1975.
3. Mauch PM: Treatment of metastatic cancer to bone, in Devita VT, Hellman S, Rosenberg SA (eds): *Cancer, Principles and Practice of Oncology*. Philadelphia, JB Lippincott Co, 1982, pp 1564-1568.
4. Wirth CR: Bone metastasis. *Curr Prob Cancer* 4:1-36, 1979.
5. Drew M, Dickson RB: Osseous complications of malignancy, in Lokich JJ (ed): *Clinical Cancer Medicine, Treatment Tactics*. Boston, GK Hall Medical Publishers, 1980, pp 97-124.
6. Blair RJ, McAfee JG: Radiological detection of skeletal metastasis: Radiographs versus scans. *Int J Radiat Oncol Biol Phys* 1:1201-1206, 1976.
7. Tofe AJ, Francis MD, Harvey WJ: Correlation of neoplasms with incidence and localization of skeletal metastases: An analysis of 1,355 diphosphonate bone scans. *J Nucl Med* 16:986-989, 1975.
8. Smalley RV, Malmud LS, Ritchie WGM: Preoperative scanning: Evaluation for metastatic disease in carcinoma of the breast, lung, colon, bladder, and prostate. *Semin Oncol* 7:358-369, 1980.
9. Bassett LW, Steckel RJ: Imaging techniques in the detection of metastatic disease. *Semin Oncol* 4:39-52, 1977.
10. Gerber FH, Goodreau JJ, Kirchner PT, et al: Efficacy of preoperative and postoperative bone scanning in the management of breast carcinoma. *N Engl J Med* 297:300-303, 1977.
11. Baker RR, Holmes ER, Alderson PO, et al: An evaluation of bone scans as screening procedures for occult metastases in primary breast cancer. *Ann Surg* 186:363-368, 1977.
12. Krishnamurthy GT, Tubis M, Hiss J, et al: Distribution pattern of metastatic bone disease. *JAMA* 237:2504-2506, 1977.
13. Corcoran RJ, Thrall JH, Kyle RW, et al: Solitary abnormalities in bone scans of patients with extraosseous malignancies. *Radiology* 121:663-667, 1976.
14. Mall JC, Bekerman C, Hoffer PB, et al: A unified approach to the detection of skeletal metastases. *Radiology* 118:323-328, 1976.
15. Meinhansen J, Choritz H, Georgii A: Frequency of skeletal metastases as revealed by routinely taken bone marrow biopsies. *Virchows Arch A Path Anat Histol* 389:409-417, 1980.
16. Singh G, Krause JR, Breitfeld V: Bone marrow examination for metastatic tumor, aspirate and biopsy. *Cancer* 40:2317-2321, 1977.
17. Ingle JN, Tormey DC, Tan HK: The bone marrow examination in breast cancer. *Cancer* 41:670-674, 1978.
18. Anner RM, Drewinko B: Frequency and significance of bone marrow involvement by metastatic solid tumors. *Cancer* 39:1337-1344, 1977.
19. Broghamer WL, Keeling MM: The bone marrow biopsy, osteoscan and peripheral blood in non-hematopoietic cancer. *Cancer* 40:836-840, 1977.
20. Ihde DC, Simms EB, Matthews MJ, et al: Bone marrow metastases in small cell carcinoma of the lung: Frequency, description, and influence on chemotherapeutic toxicity and prognosis. *Blood* 53:677-686, 1979.
21. Chernow B, Wallner SF: Variables predictive of bone marrow metastasis. *Cancer* 42:2373-2378, 1978.
22. Garmatis CJ, Chu FCH: The effectiveness of radiation therapy in the treatment of bone metastasis from breast cancer. *Radiology* 126:235-238, 1978.
23. Gilbert HA, Kagan AR, Nussbaum H, et al: Evaluation of radiation therapy for bone metastases: Pain relief and quality of life. *Am J Roentgenol* 129:1095-1096, 1977.
24. Hendrickson FR, Shehata WM, Kirchner AB: Radiation therapy for osseous metastasis. *Int J Radiat Oncol Biol Phys* 1:275-278, 1976.
25. Kumar PP, Bahrassa F, Espinoza MC: The role of radiotherapy in management of metastatic bone disease. *J Natl Med Assoc* 70:909-911, 1978.
26. Allen KL, Johnson TW, Hibbs GG: Effective bone palliation as related to various treatment regimens. *Cancer* 37:984-988, 1976.
27. Kennedy BJ: Hormonal therapies in breast cancer. *Semin Oncol* 1:119-130, 1974.
28. Smalley RV, Scogna DM, Malmud LS: Advanced breast cancer with bone-only metastases. *Am J Clin Oncol* 5:161-166, 1982.
29. Harrington KD: The role of surgery in the management of pathologic fractures. *Ortho Clin North Am* 8:841-859, 1977.
30. Parrish FF, Murray JA: Surgical treatment of secondary neoplastic fractures. *J Bone Joint Surg* 52A:665-686, 1970.
31. Knutson CO, Spratt JS: The natural history and management of mammary cancer metastatic to the femur. *Cancer* 26:1199-1203, 1970.
32. Ryan JR, Rowe DE, Saliccioli GC: Prophylactic internal fixation of the femur for neoplastic lesions. *J Bone Joint Surg* 58A:1071-1074, 1976.
33. Cheng DS, Seitz CB, Eyre HJ: Nonoperative management of femoral, humeral and acetabular metastases in patients with breast carcinoma. *Cancer* 45:1533-1537, 1980.
34. Zickel RE, Mouradian WH: Intramedullary fixation of pathological fractures and lesions of the subtrochanteric region of the femur. *J Bone Joint Surg* 58A:1061-1066, 1976.

Management of Hypoglycemia

ALAN L. GRABER, M.D.

A 38-year-old married woman was admitted to St. Thomas Hospital on Dec. 9, 1981, because of seizures and stupor. The plasma glucose in the emergency room was 25 mg/dl, and serum insulin level on that specimen was 76 mU/ml (normal less than 24). For several years she had had episodes of dizziness and confusion progressing to convulsive movements; they were worse in the late morning and late afternoon, and drinking milk seemed to relieve them somewhat. She had been hospitalized twice in the past two years for evaluation of these complaints. At these times complete neurological evaluations were normal, including CT head scans and EEGs, and the plasma glucose was also normal. Because her physician had thought she had hypoglycemia, he had ordered a five-hour glucose tolerance test, which was normal. Though hypoglycemia had never been demonstrated, he stated that her symptoms still suggested hypoglycemia and advised her to eat a high-protein diet with intermediate snacks, but the spells and symptoms continued. A year ago she had had a severe episode of dizziness and confusion while driving on the interstate and was brought to a local hospital emergency room, where a plasma glucose of 33 mg/dl was found. When she told the physician that she was known to have hypoglycemia, he emphasized that she should be more vigorous in following her high-protein diet. The spells continued, however, and were not improved by diphenylhydantoin and carbamazepine.

Physical examination was unremarkable except for moderate hirsutism, which had been present several years. At 5:00 AM on the day after admission, intravenous normal saline was started and blood specimens were obtained for measurements every two hours of plasma glucose and insulin. The results are shown in Table 1. By 10:30 AM she had bizarre behavior and had become semistuporous and confused by 11:45 AM, at which time the fast was terminated. She was given food, and placed on a high-carbohydrate diet with six feedings daily. There were no further alterations of consciousness, and the fasting plasma glucose was 66 mg/dl and 67 mg/dl on the two following days. An abdominal ultrasound, CT abdominal scan, and abdominal aortogram with selective celiac and superior mesenteric arteriograms were normal.

At laparotomy the pancreas appeared normal to inspection, but after the pancreas was mobilized, a firm nodule could be palpated in the tail of the pancreas, and distal pancreatectomy was performed. A 1.5-cm nodule was found in the interior of the tail of the pancreas (Fig. 1). Histology was compatible with an islet cell tumor. Postoperatively the patient did well, with a plasma glucose of 182 mg/dl by the end of the operation and 155 mg/dl on the following morning. Thereafter, plasma glucose remained in the normal range, and the patient has remained well.

From St. Thomas Hospital, Nashville.

TABLE 1
TEST RESULTS*

Time	Plasma Glucose (mg/dl)	Serum Insulin† (mU/ml)	Clinical
0545	96	13	alert
0830	71	39	alert
1030	35	86	bizarre
1145	16	72	semi-stuporous
1200	Test terminated and patient fed.		

*Food withheld after supper preceding evening.

†Normal fasting serum insulin is less than 24 mU/ml.

Comment

Symptoms such as anxiety, trembling, sweating, weakness, and palpitations may be due to mild hypoglycemia, while confusion, visual blurring, behavior changes, convulsions, or loss of consciousness may be due to more serious degrees of hypoglycemia. Since any of these symptoms may be due to several other causes as well, if hypoglycemia is suspected, the clinician should establish the diagnosis, so that rational and definitive therapy can be instituted. If hypoglycemia is excluded, then the clinician should establish some other explanation for the symptoms. Although in this case the diagnosis of hypoglycemia was suspected for years, it was never definitively established, and the patient continued to experience distressing and life-endangering symptoms.

The diagnosis of hypoglycemia is easy and straightforward. When symptoms of hypoglycemia occur, the diagnosis is made by demonstrating a low plasma glucose, and confirmed by improvement in the patient's symptoms with car-

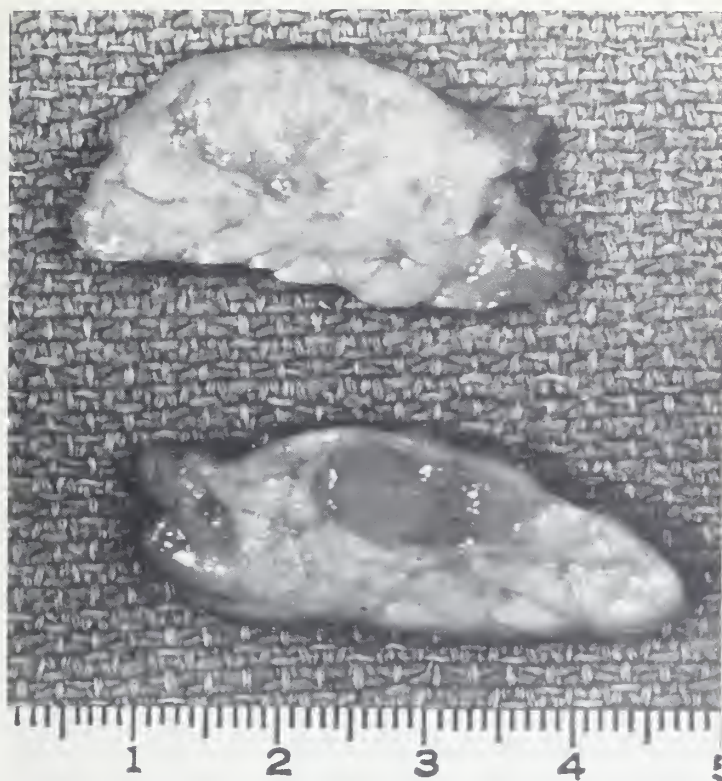


Figure 1. Section of tail of pancreas showing islet cell tumor (insulinoma).

bohydrate administration. This is called Whipple's triad.¹ Blood glucose values below 40 mg/dl, or plasma glucose values below 50 mg/dl, are considered hypoglycemia.²

Once the diagnosis of hypoglycemia has been established, the clinician should determine whether it has occurred when food has been withheld (fasting hypoglycemia), or as a response to a recent feeding (reactive hypoglycemia). If this is unclear from the episode that occurred spontaneously, then supervised fasting should be used, as in this patient.³ Even if the spontaneous episode of hypoglycemia occurred several hours after eating, fasting hypoglycemia should be excluded, since it is the most serious form of hypoglycemia. Occasionally, a patient with a disease that causes fasting hypoglycemia will also have reactive hypoglycemia and in such a case the hypoglycemia can be reproduced during fasting. In our patient, symptoms of hypoglycemia usually occurred several hours after breakfast, in the late morning, several hours after lunch, and in the late afternoon, but seldom during the night or early-morning hours. In fact, fasting plasma glucose was normal on the day of testing (Table 1), but fell to dramatically subnormal values with just a few additional hours of fasting. On other days, fasting plasma glucose levels were low-normal, though she was receiving a hearty bedtime snack on a six-feeding regimen; it is likely that,

after an overnight fast that began with supper the preceding evening (about 12 hours), her fasting plasma glucose would have been subnormal on at least some days. Note that the plasma insulin level was in the normal range when her fasting plasma glucose was normal, but spontaneously increased to abnormally high levels within the next few hours, resulting in rapid decline in plasma glucose (Table 1). This spontaneous variability in plasma insulin levels could be attributed to periodic hormone secretion by the islet cell tumor and would explain why plasma glucose values and symptoms might vary from day to day.

When fasting is undertaken, the patient should be under close medical supervision, usually with intravenous infusion of normal saline (not containing glucose), in case it becomes necessary to inject intravenous glucose for severe hypoglycemia. The frequency of serial measurements of plasma glucose should be determined by the clinical history and the condition of the patient. Some patients will develop hypoglycemia within a few hours of fasting and should have hourly measurements of plasma glucose; others may require 24 hours or more and measurements every three or four hours will suffice. A trend of falling plasma glucose may be noted before the patient experiences symptoms. As soon as the diagnosis is established, the patient should be fed a high-carbohydrate meal, or receive an intravenous glucose injection if severely symptomatic and unable to eat. Thereafter, he should receive frequent high-carbohydrate feedings, and intravenous glucose if necessary, until definitive therapy can be instituted. If plasma glucose values do not fall to hypoglycemic levels, the fast should be continued up to 72 hours if the patient is male. In women, fasting beyond 24 hours has not proven discriminating, as prolonged fasting has a greater blood-glucose-lowering effect on healthy women.⁴ Exercise during fasting almost always results in further falls in blood glucose levels in patients with fasting hypoglycemia, but not in normals.

Symptoms of anxiety, weakness, and hunger during fasting with accompanying plasma glucose values in the normal range should be attributed to stress, hunger, or other factors.


If hypoglycemia develops during fasting, the measurement of immunoreactive insulin on the same blood sample will establish whether hyperinsulinism is responsible for hypoglycemia. Since measurement of insulin concentration is of no value if hypoglycemia does not occur, the laboratory should be instructed to obtain enough blood

with each specimen so that plasma insulin levels can be measured if hypoglycemia occurs.³ If hypoglycemia never occurs, the serum held for insulin measurement can be discarded. In the present patient, serum immunoreactive insulin levels were inappropriately elevated during spontaneous fasting hypoglycemia, indicating autonomous production of insulin by an islet cell tumor. If the insulin levels are low during hypoglycemia, then some other cause, such as adrenal or pituitary insufficiency, extrapancreatic tumor, or hepatic disease, is responsible. In this patient, extra serum was also available from the glucose specimen obtained in the emergency room, when the plasma glucose was 25 mg/dl. Eventual measurements of this specimen also indicated inappropriate hyperinsulinemia during spontaneous hypoglycemia.

Most serious cases of hypoglycemia are of the fasting variety, often due to a benign islet cell tumor, which can be totally cured by surgical resection.⁵ Some cases have escaped detection for as long as 20 years; therefore the presence of long-standing symptoms should not be a deterrent to establishing a precise diagnosis.⁶

Reactive hypoglycemia occurs after food is ingested. After gastrectomy, gastrojejunostomy, or vagotomy and pyloroplasty, ingested nutrients are rapidly absorbed from the jejunum, resulting in an overproduction of insulin, and hypoglycemia two or three hours after eating. In some cases of mild glucose intolerance, hyperglycemia occurs during the first two hours after glucose ingestion followed by hypoglycemia three, four, or five hours after the glucose meal. Up to 25% of normal asymptomatic people have plasma glucose values below 55 mg/dl during a five-hour oral glucose tolerance test.⁷ Some of these people may experience symptoms of hypoglycemia after ordinary meals, but reactive hypoglycemia after meals in the absence of preceding gastric surgery has rarely been adequately documented.⁸ Widespread public interest in this problem has been generated by books and articles about "hypoglycemia" in the lay media. Since hypoglycemia during a glucose tolerance test does not establish

the occurrence of hypoglycemia after actual meals, one must demonstrate that hypoglycemia is present when symptoms occur, thus fulfilling Whipple's triad, before assuming that symptoms such as nervousness, fatigue, or other somatic complaints are due to hypoglycemia.

A high-protein diet, frequently recommended for hypoglycemic conditions, was of no benefit in this patient. As a matter of fact, both protein and amino acid feedings result in insulin secretion.⁹ A diet with multiple feedings of complex, slowly absorbed carbohydrate theoretically offers the best protection against hypoglycemia. It is well known that a low-carbohydrate diet is associated with hyperglycemia during the first two hours of a glucose tolerance test, the so-called starvation diabetes. It is less widely appreciated that this same low-carbohydrate, high-protein diet actually causes hypoglycemia during the third, fourth, and fifth hours after a glucose load.¹⁰ Therefore, the popular low-carbohydrate "hypoglycemia diets" may actually cause more hypoglycemia than they help. There is no rationale for a low-carbohydrate diet in the treatment of any type of hypoglycemia, other than the restriction of simple sugars and concentrated sweets in patients who have had stomach operations and those who have early diabetes mellitus. 

REFERENCES

1. Whipple AO, Frantz VK: Adenoma of islet cells with hyperinsulinism; a review. *Ann Surg* 101:1299, 1935.
2. Steinke J: Hypoglycemia, in Marble A, White P, Bradley RF, et al (eds): *Joslin's Diabetes Mellitus*, ed 11. Philadelphia, Lea and Febiger, 1971, pp 797-817.
3. Crofford OB, Graber AL: Symptomatic hypoglycemia in adults: a protocol for clinical and laboratory evaluation. *South Med J* 66:74-78, 1973.
4. Fajans SS, Floyd JC Jr: Fasting hypoglycemia in adults. *N Engl J Med* 294:766-772, 1976.
5. Stefanini P, Carboni M, Patrassi N, et al: Beta-islet cell tumors of the pancreas. Results of a study of 1067 cases. *Surgery* 75:597-609, 1974.
6. Nelson RL, Rizza RA, Service FJ: Documented hypoglycemia for 23 years in a patient with insulinoma. *JAMA* 240:1891, 1978.
7. Permutt MA: Postprandial hypoglycemia. *Diabetes* 25:719-733, 1976.
8. American Diabetes Association: Statement on Hypoglycemia. *Diabetes Care* 5:72-73, 1982.
9. Floyd JC Jr, Fajans SS, Conn JW, et al: Insulin secretion in response to protein ingestion. *J Clin Invest* 45:1479, 1966.
10. Permutt MA, Delmez J, Stenson W: Effects of carbohydrate restriction on the hypoglycemic phase of the glucose tolerance test. *J Clin Endo Metab* 43:1088-1093, 1976.

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 52-year-old woman was admitted to St. Thomas Hospital for evaluation of palpitations and dyspnea. As a child she had a history of rheumatic fever and at age 16 was thought to have subacute bacterial endocarditis. A mitral commissurotomy had been carried out ten years previously and was complicated in the early postoperative period by the sudden appearance of left hemiparesis. A cardiac catheterization five years prior to this admission showed significant mitral stenosis with a gradient across the mitral valve of 24 mm Hg. She had documented pulmonary hypertension with pressures of 75/40. Six months prior to admission she had an episode of atrial fibrillation, which subsequently reverted to normal sinus rhythm. The day prior to admission she abruptly developed severe fatigue and dyspnea. At time of admission she was found to have an intermittently irregular rhythm with a rate of approximately 90/min. She had a very loud first sound, a left parasternal heave of moderate degree, and a grade III/VI apical diastolic rumble. There was no detectable opening snap.

The admission electrocardiogram disclosed atrial flutter with variable block. The serum digoxin level on admission was 2.3 ng/ml with a potassium level of 3.3 mEq/liter. She was started on potassium chloride, quinidine 200 mg orally every six hours, and propranolol (Inderal) 10 mg orally every six hours. T_4 , T_3 , TBG and TSH were within normal range. The digoxin was stopped, and four days later the digoxin level was 1.8 ng/ml, the quinidine level was 4.1 μ g/ml and the potassium was 5.2 mEq/liter. An electrocardiogram was obtained (Fig. 1).

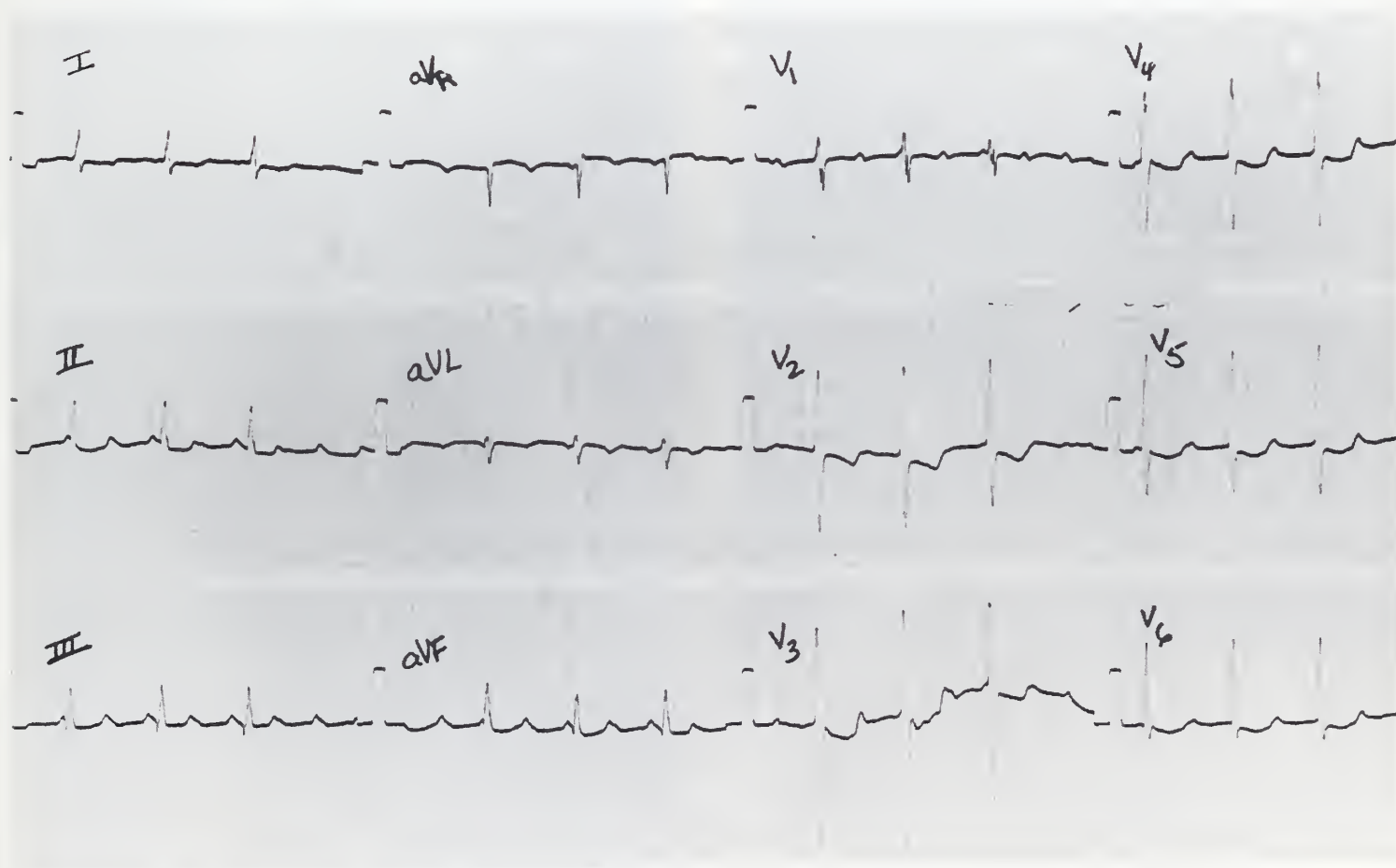


Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Discussion

This electrocardiogram shows a regular atrial rate at 188/min. The P waves are easily seen in leads II, III, aVF and V₁. The ventricular rate is 87/min. There is 0.02 second shortening between the first and second pair of R waves in I, II, III and aVR, aVL, aVF. The PR interval varies and there is no discernible relationship between P waves and QRS complexes.

The QRS complex is 0.08 seconds in duration. Watanabe and Driefus have proposed that arrhythmias with atrioventricular (AV) block be categorized on the basis of QRS duration. His bundle studies have demonstrated that patients with QRS complexes greater than 0.12 seconds in duration usually have block anatomically located below the His bundle. Progression from second to third degree block is much more common in this type of block. AV blocks associated with QRS duration less than 0.12 seconds are more commonly transient. They are often associated with aggravating metabolic problems. These blocks are commonly located above the His bundle.¹

Until the last series of four (leads V₄, V₅, V₆), every fourth R wave is absent. The pause is not "compensatory" (i.e., the next R wave is not "on time") and except for the first dropped beat, the RR interval bracketing the dropped beats is less than twice the normal interval. This lack of compensatory pause coupled with slight diminution in the RR interval suggest the possibility of an atypical Wenckebach mechanism with intermittent lack of conduction from the junctional focus resulting in the dropped beat. (This should not be confused with the usual AV nodal

Wenckebach, which would be associated with progressive PR prolongation establishing a definite periodic relationship with QRS complex and P waves.)

The coexistence of two rapid regular mechanisms is often referred to as "double tachycardia." Atrial ventricular dissociation is, of course, invariably present.¹ It has been clearly documented in the literature that junctional tachycardia is most commonly produced by excessive digitalis glycosides.² It is of interest that this patient had been off digitalis glycosides for four days, and had levels in therapeutic range at the time this dysrhythmia was recorded. (The patient was not azotemic and institution of quinidine therapy may have resulted in the unusual elevation of digoxin levels.)³

The patient subsequently underwent mitral valve replacement with a porcine xenograft. She had AV sequential pacing in the postoperative period and following discharge had continued in sinus rhythm.

CONCLUSIONS: (1) Atrial tachycardia with non-paroxysmal junctional tachycardia ("double tachycardia"); (2) AV dissociation; (3) Intermittent lack of QRS capture, possibly due to Wenckebach periodicity in AV junctional conduction tissue.

REFERENCES

1. Watanabe Y, Driefus L: *Cardiac Arrhythmias: Electrophysiologic Basis for a Clinical Interpretation*. New York, Grune & Stratton, 1977, pp 215-217.
2. Knoebel SB, Fisch C: Accelerated junctional escape: a clinical and electrocardiographic study. *Circulation* 50:151, 1974.
3. Rieffel JA, Lealey EB, Drusin RE, et al: A previously unrecognized drug interaction between quinidine and digoxin. *Clin Cardiol* 2:40-42, 1979.

COMMUNITY SERVICES DIRECTORY AVAILABLE

The Council of Community Services announces the availability of the 1982-1983 *Directory of Community Services*. Included in this 23rd biennial edition are the following:

- Alphabetical listing of 405 health, welfare and recreational agencies and their programs in Davidson County, including address, telephone, executive staff, description of services, eligibility requirements, ages served, fee for services, hours of services, and sources of funding.
- Additional listing for 129 agencies in Cheatham, Robertson, Rutherford, Sumner, Trousdale, Williamson and Wilson counties.
- Alphabetical Index, including agencies, programs and telephone numbers.
- Functional Index, providing a categorical listing of agencies by type of services offered.
- A Day Care Appendix listing licensed day care facilities by geographic area.

The cost of this directory is 1-4 copies \$8 each; 5-24 copies \$7.50 each; 25 or more copies \$7 each, plus an additional charge of \$1 for postage and handling for 1-10 copies; \$2 for 11-20 copies; and \$3 for 21-30 copies.

To order, send your check payable to Council of Community Services, 250 Venture Circle, Nashville, TN 37228, or call (615) 254-8352.

Radiology Case of the Month

RICHARD BENATOR, M.D. and RANDALL L. SCOTT, M.D.

A 61-year-old man with a history of chronic low back pain had an acute exacerbation of his pain. There was no motor or sensory deficit. Radiographs of the lumbar spine were obtained (Fig. 1). What is the best diagnosis?

- (1) Abdominal aneurysm
- (2) Spondylolisthesis
- (3) Left ureteral stone
- (4) Tear drop vertebral body fracture



Figure 1. AP and lateral lumbar spine.

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

Radiographic Findings

Figure 1 is an AP and lateral view of the patient's lumbar spine demonstrating a right scoliosis and degenerative spurring of the lumbar vertebrae. Prevertebral linear calcifications parallel to the anterior longitudinal ligament are present. All vertebral bodies are of normal height with no visible fracture lines or anterior erosions.

Spondylolisthesis is characterized by subluxation of vertebral bodies, typically at the disc space of L4 or L5. This subluxation follows a fracture of the pars interarticularis and is also known as spondylolysis. The presence of normal vertebral body alignment on the lateral view of the lumbar spine effectively excludes the diagnosis of spondylolisthesis.

Ureteral calculi may induce psoas muscle spasm due to inflammatory changes within the involved ureter. Lumbar scoliosis concave towards the involved side is often the result. On a single radiograph of the spine it is often not possible to differentiate acute scoliosis due to spasm from a chronic bony abnormality. Therefore, the presence of scoliosis in this case would only be suggestive of acute muscle spasm due to ureteral stone if a radiopaque calculus were apparent. Since 80% of renal calculi are radiopaque, the absence of calcification along the course of the left ureter makes the diagnosis of left ureteral stone less likely. In addition, there is no history of hematuria or pain radiating to the left inguinal area.

The linear calcifications anterior to the lumbar spine on the lateral view appear to be outlining the anterior and posterior borders of the atherosclerotic abdominal aorta. However, at the L3 intervertebral disc space the distance between the calcifications is maximum, rather than tapering as does a normal abdominal aorta. Therefore the best radiographic diagnosis is abdominal aortic aneurysm, presumed due to atherosclerosis.

Discussion

More than 95% of abdominal aortic aneurysms are due to atherosclerosis. Rarely, trauma, syphilis, infection, or cystic medionecrosis is responsible. The clinical manifestations of abdominal aortic aneurysms are varied. Most commonly the patient is asymptomatic, and the aneurysm is discovered on a routine physical examination. Other manifestations range from vague discomfort to excruciating pain in the epigastrium, flank, or back. The presence of severe pain suggests



Figure 2. Longitudinal ultrasound scan through the infrarenal abdominal aorta demonstrating a fusiform aneurysm measuring 4 cm in greatest diameter.

leakage or actual rupture of the aneurysm and is usually associated with signs of blood loss,¹ although when quite large an aneurysm may cause pain simply due to pressure on adjacent nerves or viscera. In addition, long-standing aneurysms may erode adjacent vertebrae, causing a concave deformity of the anterior cortical borders.

At physical examination, usually a midline, pulsating mass that may be tender to palpation is found. On gross examination, atherosclerotic abdominal aortic aneurysms are usually manifested by fusiform dilatation, with 95% or more originating distal to the origin of the renal arteries.^{2(p71)}

The prognosis varies, depending on the maximum diameter of the aneurysm. These are divided into three groups according to their diameter: small, between 3 and 4 cm; large, 4 to 6 cm; and huge, more than 6 cm.³ The larger the aneurysm the greater the likelihood of rupture. If the overall diameter is greater than 7 cm there is a 60% to 80% risk of impending rupture. On the other hand, if the overall diameter is less than 5 cm, risk of rupture is only 1%. Between 6 and 7 cm diameter the risk of rupture ranges from 40% to 60%.^{2(p71)} If abdominal aortic aneurysmal rupture occurs, the mortality is very high, ranging from 57% to 81.6%.³

Ultrasonography is the imaging method of

(Continued on page 488)

Physician Recruitment Program

Editor's Note

The TMA makes this space available each month for the TDPH to apprise TMA members of its services. This month the Department describes a service new for TDPH but old for TMA and its members. In the mid-1950s TMA began a medical recruiting service like that described in the following report. TMA's efforts include a monthly listing in the JOURNAL of practice opportunities within the state as well as communities in need of physicians or established physicians in practice seeking an associate. Listings are periodically sent to residents in Tennessee training programs urging them to consider establishing their practice in Tennessee when their training is complete.

TMA's program is still alive and well, and has been used as a model for programs now in force by numerous other state associations nationwide. The TMA and TDPH programs should not be construed as competitive. They both supplement and compliment each other as we all pursue a common goal: better health care for Tennesseans.

Tennessee communities that need physicians and physicians needing communities in which to practice or associates to share their practices may now use a service of the Tennessee Department of Public Health that recruits for private medical practice in Tennessee. This matchmaking service seeks to identify opportunities in all specialties across the state and to help physicians who want to come to Tennessee find a suitable place to practice.

The Tennessee Physician Recruitment Program serves all communities across the state; however, there is a special concern for rural areas and small to medium-sized towns, those areas that traditionally have had inadequate numbers of physicians. There are no fees to anyone, since the service is funded by the Tennessee Department of Public Health.

The impetus for the development of the program began several years ago with discussions in the Governor's Office and the Department of Public Health about what the State of Tennessee could do to address the problem of physician maldistribution. Several neighboring states, most notably North Carolina, had with some success developed and funded programs to ameliorate this problem. Following a visit to the North Carolina program by a number of state officials, the decision was made to establish a Physician Recruitment Program in Tennessee.

The expectation for the program was that through the provision of broader exposure of practice opportunities to physicians wanting to practice in Tennessee and the expertise available from staff to help communities develop a competitive recruitment strategy, Tennessee would be more successful in recruiting. It was also expected that physicians who might otherwise have chosen a practice location elsewhere would choose a Tennessee site when they were made aware of opportunities that met their needs.

An important aspect of the program beyond its matchmaking function is the staff expertise available to Tennessee communities for recruitment. The program staff attempts to visit each community where a practice opportunity is listed to see the town and to discuss the practice setting with those initiating the recruitment process. Since the program began in January, 1982, dozens of Tennessee communities have been visited as part of the process of identifying practice opportunities across the state. Members work with a local search committee, physician, or hospital to analyze what the community has to offer a physician both in his practice and as a place to live. Program staff, familiar with the norms across the state in recruiting incentives, enhance the community attempt to offer reasonable but competitive incentives.


Practice opportunities in all specialties will be listed. It is expected that the majority of the listing will be in the primary care fields of Family Practice, General Practice, Obstetrics-Gynecol-

From the Tennessee Department of Public Health, Nashville.

ogy, Pediatrics, and Internal Medicine; however, other specialties also are listed, such as General Surgery, Orthopedic Surgery, Urology, Otolaryngology, Radiology, Anesthesiology, Emergency Medicine and subspecialties of Internal Medicine.

At the same time the program is listing practice opportunities all across Tennessee, it is publicizing itself to physicians who may be looking for a place to practice. Residency programs in Tennessee have warmly received the development of this program. In nearly every residency program visited in Tennessee (12 at this writing) staff will be conducting conferences on "Choosing a Practice Opportunity" that emphasize the long-term issues in choosing a practice setting, and at the same time it will work with

individual residents to identify opportunities that meet the specific needs of the young physicians and their families. The program has also been publicized in residency programs in neighboring states and will advertise nationally on a scheduled basis in the *Journal of the American Medical Association*, the *New England Journal of Medicine*, *Family Practice* and other specialty journals as appropriate.

Persons wishing to list a practice opportunity or physicians seeking a place to practice in Tennessee may contact the program director, Ms. Sandy Johnson, at 615-741-7308, or write to Physician Recruitment Program, Tennessee Department of Public Health, Health Services Administration, R. S. Gass Building, Ben Allen Road, Nashville, TN 37216. 

Radiology Case of the Month . . .

(Continued from page 486)

choice for abdominal aortic aneurysm. It is non-invasive, nonionizing, and relatively inexpensive. Both real-time and B-scan modes are used. Real-time scanning allows the pulsatile nature of the mass to be evaluated. Direct and accurate measurement of the aortic diameter in the transverse plane is easily performed and demonstrates the fusiform characteristics which are typical of atherosclerotic aneurysms. Figure 2 is a selected longitudinal scan of this patient's infrarenal aorta. Ultrasonography can often answer the question of the relationship of the abdominal aortic aneurysm to the origin of the renal arteries. Also, this modality can give information about the extent of thrombus formation, dissection, and retroperitoneal hemorrhage. The only disadvantage is related to artifact induced by gas or barium within the bowel, which may lead to a delay in the examination.^{2(p71-77)}

Frequently, a supine abdominal radiograph or lumbar spine series will demonstrate an aneurysm by the associated calcified atheromatous plaques, as in this case. Without the calcified plaques the diagnosis depends on secondary signs of mass effect, which can be difficult to interpret unless the aneurysm is quite large. Furthermore, the diameter as measured from a plain radi-

ograph requires correction for magnification.

Abdominal aortography and radionuclide flow scans will tend to underestimate the size of an aneurysm, since they do not reveal the size of the thrombus lining the aneurysm. Arteriography is very useful for presurgical evaluation of the extent of the disease with regard to renal artery involvement, distal run-off, and collateral circulation.

In this particular case, the patient was being evaluated by orthopedics for chronic low back pain with acute exacerbation; the abdominal aortic aneurysm was serendipitously deduced from the non-tapering atherosclerotic plaques. Ultrasonography then confirmed the 4 cm aortic aneurysm as seen in Figure 2. This patient's symptoms may or may not have been related to his aneurysm, but he will now be followed for this potentially life-threatening disorder.

DIAGNOSIS: (1) Abdominal aneurysm. 

REFERENCES

1. Sabison M: *Textbook of Surgery*. Philadelphia, WB Saunders, 1977, pp 1909-1910.
2. Goldberg BB *Abdominal Gray Scale Ultrasonography*. New York, John Wiley & Sons, Inc, 1977, pp 71-83.
3. Lee KR, Walls WJ, Martin RL, et al: A practical approach to the diagnosis of abdominal aortic aneurysms. *Surgery* 78:195-201, 1975.



GEORGE W. HOLCOMB, JR.

As Others See Us

I wish to share with the membership the following letter which I received recently. To me it indicates an earnest desire of the writer to express concern for various aspects of medicine which need attention. The following concerns were expressed:

It is my opinion that the TMA should address the following areas of medical practice:

1. Over-specialization by doctors, causing patients extra expense when a specialist does not treat related ailments besides his "specialty." The patient has the feeling that each one gets "a piece of the patient."
2. Patients do not approve the policy of Group Practitioners who have a different doctor to see the patient each day of hospitalization, resulting in treatment by a doctor the patient has not selected, has no confidence in his abilities, and perhaps may even dislike the doctor. This is convenient for the doctors in group practice, but not in best interests of patients.
3. Over-exposure to X-ray radiation, a subject that received publicity recently—non-licensed technicians and no regular inspections of equipment. Doctors are not taking precaution of asking patients regarding the number of X-rays they have had and avoiding unnecessary X-rays.
4. Doctors' responsibility in helping to overcome the shortage of nurses. Patients need nurses as much as they do doctors for good health care. (Is there truth to the accusation that many excellent nurses leave the profession due to objecting to attitudes of doctors who "treat them like scullery maids"?)
5. Doctors' responsibility for not allowing those doctors who are incompetent, negligent, or addicted to drugs or alcohol to endanger the health of patients. Doctors do not want interference by government in "policing their own ranks," but fail to take action themselves on this problem.

In my reply, which I shall summarize, I made no apology for the role of specialists. I did state that medical schools today are de-emphasizing specialization, and increasing the number of primary care physicians in training. I had no difficulty explaining the physician's need for a day out of the office for rest and recreation, but in all sincerity I could not adequately defend the practice of a different physician visiting the hospitalized patient each day.

My confidence returned as I informed her that the TMA has actively supported improvements of inspection of radiographic equipment by the Tennessee Department of Public Health. Apparently we should communicate more effectively our concern for over-exposure of radiation and question our patients more carefully about recent radiographic studies.

I emphasized the mutual respect that exists between doctors and the many dedicated members of the nursing profession. We seem to be blamed for the shortage of nurses when the true reasons, more likely, are related to long hours, weekend duty, economic factors and the desire to be at home with their families during certain stages of their lives.

With pride, I pointed out that medicine is the most monitored profession in existence today. Standards of care have been established and we are subjected to peer review and continuing medical education requirements. I concluded with an enthusiastic endorsement of our impaired physician program with its ultimate goal of rehabilitation, and if possible a return to practice.

The issues raised in this letter have troubled me and I was able to answer each point raised by the writer only in general terms. Somehow, we must articulate to our patients the strengths of our profession and the safeguards we have established. Each of us must respond individually to these criticisms in our daily practice of medicine and in every personal encounter. We must continually evaluate ourselves and our practice patterns from a patient's viewpoint. After all, our patients are our strongest allies.

George Holcomb Jr MD

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932.

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson
GEORGE W. SHANNON, M.D., Jackson
CLAUDE H. CROCKETT, JR., M.D., Bristol
H. VERDAIN BARNES, M.D., Chattanooga
FRANCIS W. GLUCK, JR., M.D., Nashville
JOHN B. THOMISON, M.D., Nashville, Ex-Officio

JULY, 1982

editorials

Inroads

When I became editor more than a decade ago, the JOURNAL had a section called the "Viewing Box," in which items of interest from other journals were reprinted. It was a good idea, introduced by my predecessor in a day when fare for the JOURNAL was meagre. With the death some

ten years ago of the journal published by the Shelby County Medical Society our contributions picked up, and a few years back I discontinued the Viewing Box, because it delayed publication of other material, and possibly just as importantly, because with rapidly spiraling costs of publication it was economical to do so.

Every now and then an article with special impact comes along, and we reprint it. Such is the case of the one entitled "Inroads" in our Viewing Box this month, from the President's Page of the *Journal of the Kentucky Medical Association* that was highly enough regarded to be published in *AM News*. It is reprinted here because Jim Hays, chairman of our Legislative Committee, wanted to be sure you didn't miss it. So be sure not to miss it!

Over the years our TMA staff has caught a good deal of flack for not blocking legislation inimical to the interest of our members, or for failing to steer needed bills through the legislature. TMA has now and has always had capable, dedicated men on "the hill," men who work as hard as they can for you, but what they can accomplish in your behalf is limited. According to Senator Dirksen (as quoted in our Viewing Box), politicians have three major goals: to get elected, to get re-elected, and to get even. When 300 optometrists show up on Capitol Hill to confront a mere handful of our member ophthalmologists, it is obvious who will have the ear of legislators. I single out the ophthalmologists only as an example, because we are all guilty. That we have fared as well as we have is a tribute to the good sense and dedication of some of our legislators, an indication that Senator Dirksen's comment is perhaps unnecessarily cynical. They have listened to our hard working legislative committee and a few dedicated "contact doctors." Most of the rest of us can keep our hands in our pockets when the song "Give Yourself a Pat on the Back" is sung.

Because they are elected to reflect in the law-making process the desires of their constituents, legislators are obviously influenced by numbers, but they are most of them also reasonable people who want very much to do what is right. It is why we are a republic and not a true democracy. We elect men we think can become informed on a subject and legislate on that basis. Our legislators need educating in medical matters, and they need educating by you and not by our paramedical colleagues. If you wish your legislator to vote in a certain way on a medical issue, *you* tell him.

Our lobbyists are capable, knowledgeable people, but they are, after all, hired hands in the eyes of the legislators. They need to see *your* interest and listen to *your* counsel.

If you think inroads are being made in your practice, take a moment to see if some of the fault might be yours.

J.B.T.

Thoughts for the Fourth

Now that warm weather seems finally here to stay, things have about shaken out, and it looks as if we lost the six Burford hollies around our patio. They have been there for more than 20 years, but this past winter did them in. I find this a common story around Nashville and throughout Middle Tennessee. Not only that, the magnificent crepe myrtles that dot the route I take each day seem gone for good this time, having survived many another bout with cold and drought. It would be a bonanza for the nurseries, except that they shared the experience, and worse still, the high interest rates have made it impossible for many of them to replace their stock. Over a dozen of those old reliables in the mountains of Warren and DeKalb counties have folded, costing many a person his livelihood.

The landscape of Nashville undergoes periodic remodeling, as man and nature together and separately try their handiwork. Many fine old trees were victims of a tornado that swept through one of Nashville's residential areas last July, but bulldozers can do the same almost as quickly—and they do. It is a rare day that does not bring news of some catastrophe visited on mankind by nature, and those are often abetted by man's ingenuity, as in reshaping the landscape he often destroys natural barriers.

The other day I saw an exhibit of early photographs, some among them of Civil War battlefields. Even those old cannon were quite efficient at demolishing trees and pitting the earth. We have stepped up our firepower until it is possible, at least theoretically, to turn our planet into a cinder. We are frighteningly close just now to finding out whether or not it is also practically possible, except that if it is, few of us will ever know it.

Each spring the greening of the earth masks the ravages of freezing cold, blistering heat, torrential rains, raging streams, and devastating winds. New friends replace fallen comrades. Except for brief moments of nostalgia, we soon forget. It is no doubt a defense that protects our sanity, but we need from time to time to take just a moment to remember.

The movies and television have made it possible for us at least superficially to live vicariously the lives of many other people, and to visit in our minds, more vividly than even from picture books, many, many places and situations. Yet something—perhaps even everything that is most important—is missing. We do not feel the biting cold at Valley Forge, nor the stinging sands and burning winds of desert warfare. We miss the soggy, deadening humidity of the jungle, with its insects, snakes, and carnivores. We avoid the pain of the leg shattered by a land mine or of the arm blown away by a stray cannonball. Sitting in the warmth of a theater, or in the relaxed comfort of our living room, the winning and protecting of this country's freedom seem to have been pretty easy, aside from some mild inconveniences.

By the time you read this it will be mid-July, and Independence Day will have come and gone. I hope you took a moment to reflect on freedom's cost, to reflect on the precariousness of our own situation, global, national, and individual, to reflect on the impermanence of life itself. And then I hope you took a moment to thank God for each of those things we have been given, to ask Him to give us the will and the courage to see this nation and each of us individually through the precarious times ahead, and to give us the faith to face life's eventual termination in peace. I hope you did all that.

In case you didn't, there is, as of this writing, still time.

J.B.T.

Shifting Sands

Several years back, there was a great hue and cry over violence on television. Even the Congress held hearings, as parent groups, the AMA, and so on banded together to get something done

about this trauma to our children's psyche. Something was indeed done about it. Psychologists, and even some psychiatrists, avowed that no ill effects from it were apparent, and the producers responded to that proclamation by stepping up the pace. The pace does not yet approach that of the "R" rated movies, but it sometimes does seem to surpass the "PG" rating—or at the very least, the bounds of good taste.

It is true that while I was growing up I watched a lot of Indians slide from the saddle, but dying was not quite so graphic then, and it was done in black and white. Gore was seldom evident. Most important, though, was that the very witnessing of it was a production. Instead of a mere flick of a button and settling back into an easy chair with a soda pop, it required a trip downtown on a valuable Saturday morning, and putting down a hard-won dime (yep, shore did) for a ticket.

Not to worry, everyone said (well, almost everyone). It won't warp Junior's mind a-tall.

As it usually happens, after the new wore off and a few tools got blunted, everybody forgot about violence on TV and went on to greener pastures. Three Mile Island and Love Canal got us worried about our bodies—which everybody knows are more important than our minds. After all, without a body, how would you carry your mind around? Then, too, we had the baby seals, the whales, and oil spills killing the grebes to worry about. That sort of violence is a lot easier to deal with, because it is not so immediate, and you don't feel so bad when you lose your fight.

Well, folks, you now have the ammunition to get back in and win your fight against TV violence—if only you can find someone to listen (assuming, of course, *you* are still interested). A report just out from the National Institute of Mental Health—about five years late, I should judge—has presented "overwhelming evidence" that there is indeed a connection between violence on the tube and Junior's aggressive behavior.

Silence. Well, almost.

Said the producers, "What did you expect?" After all, those doing the study, they said, went into it knowing what they wanted to prove, and they proved it. Big deal.

"Hooray," murmured the TV watchdog groups. "We knew it all along. Watch that salt shaker! Don't you know salt gives you high blood pressure?"

And anyhow, there's a war on.

J.B.T.



Richard E. Ching, age 78. Died April 28, 1982. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Robert Alexander Moore, age 62. Died May 3, 1982. Graduate of University of Tennessee College of Medicine. Member of Sumner County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Terry Wayne Branson, M.D., Chattanooga
Marty Scheinberg, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Volker Gert Winkler, M.D., McKenzie

LAWRENCE COUNTY MEDICAL SOCIETY

Thomas L. Schumann, M.D., Lawrenceburg

McMINN COUNTY MEDICAL SOCIETY

Wallace F. Burroughs, II, M.D., Athens

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Neil B. Edwards M.D., Memphis

(Students)

Cecil C. Agee, Bartlett
Brad E. Blankenship, Memphis
Donald M. Blanton, Memphis
Janet M. Bowen, Memphis
Thomas A. Brandon, Memphis
Pamelyn Close, Memphis
Jerrall P. Crook, Jr., Memphis
Hugh K. Duckworth, Memphis
Louis B. Fields, Memphis
Robert L. Hippen, Jr., Memphis
Michael B. Johnson, Memphis
Beverly J. Morrison, Memphis
James M. Nanney, Memphis
Molly M. Peeler, Covington
John R. Reisser, Memphis
Allen T. Sherwood, Memphis
Thomas Siler, Jr., Memphis
Ganesan Sriram, Memphis
William D. Summers, Memphis
Steven Trimble, Memphis
Thomas B. Whittle, Oak Ridge
Richard M. Work, Memphis

NASHVILLE ACADEMY OF MEDICINE

A. Sahib M. Al-Abdulla, M.D., Nashville
Glenn S. Buckspan, M.D., Nashville
Stephen L. Hines, M.D., Nashville
Paul Latour, M.D., Nashville
James R. McFerrin, M.D., Nashville
Richard A. Orland, M.D., Nashville
Frank A. Perry, Jr., M.D., Nashville
Richard W. Quisling, M.D., Nashville
Steven Tate, M.D., Nashville
Thomas C. Whitfield, Jr., M.D., Nashville

(Students)

W. Garrison Strickland, Nashville
John W. VanWert, Nashville

ROBERTSON COUNTY MEDICAL SOCIETY

Gilbert Bazaldua, M.D., Springfield

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

Robert T. Strang, Jr., M.D., Kingsport

SUMNER COUNTY MEDICAL SOCIETY

David E. Roberts, M.D., Gallatin
John K. Thompson, M.D., Gallatin

WILLIAMSON COUNTY MEDICAL SOCIETY

Kenneth W. Hicks, M.D., Franklin

personal news

Laurence A. Grossman, M.D., Nashville, has received a brotherhood award from the Nashville chapter of the National Conference of Christians and Jews, recognizing his many years of humanitarian efforts in the community.

Charles E. Kossmann, M.D., professor emeritus of medicine-cardiology at the University of Tennessee Center for the Health Sciences, Memphis, and long-time contributor of the Medical Grand Rounds in the JOURNAL, has become the only Memphis physician to be elevated to the rank of Master in the American College of Physicians. Only 169 fellows of the ACP membership of 52,939 have been elevated to the degree of Master.

Alejandro A. Rivas, M.D., Old Hickory, has been certified as a Diplomate of the American Board of Surgery.

Courtney Shands, III, M.D., a recent graduate of the Vanderbilt University School of Medicine, has received the Nashville Academy of Medicine's Tom E. Nesbitt Award, which recognizes a medical student member who is of exemplary character and has demonstrated a genuine interest in medical affairs at the local level.

TMA Members Receive AMA Physician's Recognition Award

Eighteen TMA members qualified for the AMA Physician's Recognition Award during April 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

James T. Allen, M.D., Murfreesboro
Bebe A. B. Avery, M.D., Knoxville
Richard J. Davis, M.D., Nashville
John D. Franklin, M.D., Nashville
Elsbeth Gehorsam, M.D., Memphis
Thomas E. Hanes, M.D., Madison
Robert L. Harrington, M.D., Dyersburg
Ronald F. Kourany, M.D., Nashville
H. Lynn Magill, M.D., Memphis
Morris W. Ray, M.D., Memphis
Chi Y. Ryu, M.D., Madison
Edward L. Tarpley, M.D., Nashville
Doris K. Thomson, M.D., Chattanooga
Robert P. N. Thuan, M.D., Dickson
Elsie V. Tomkinson, M.D., Loudon
C. Richard Treadway, M.D., Nashville
William O. White, M.D., Chattanooga
John W. Zirkle, M.D., Jefferson City

national news

From the AMA's Office in Washington, D.C.

Anti-FTC Bill Goes to Senate

The Federal Trade Commission's asserted jurisdiction over the professions, including medicine, would be stripped from it under a bill approved by the Senate Commerce Committee.

The committee action, on a 10-5 vote, was a triumph for the American Medical Association and other professional groups that have been challenging the FTC's seven-year campaign against health and other professional associations.

The Supreme Court earlier this year failed to resolve the jurisdictional question in a tie, 4-4 vote on the landmark FTC case against the AMA's code of ethics governing advertising by physicians. As a result, the FTC's strictures against the AMA were left standing.

The AMA and other professions have argued that the FTC was established to police business activities, not those of the learned professions which are gov-

erned by state regulations.

The Commerce Committee action came after a heated debate on an amendment by Sen. Ted Stevens (R-AK) to a bill reauthorizing the FTC for three years. Addressing his fellow committee members and before a crowded hearing room, Stevens said the FTC had not asserted any jurisdiction against the professions until 1975, after which "there has been considerable controversy."

The committee should assure that the states can continue their traditional role of regulating the professions and the professions should be given the opportunity to discipline themselves, Stevens said. He noted that the Justice Department would continue to have powers to employ the antitrust statutes against the professions.

"The issue is the increasing extension of the federal bureaucracy into our daily lives," asserted Stevens. "Why should the FTC remove from the states the burden of being responsive to change?" he asked. If the present FTC course continues, the Senator said, "in the end you will have federal standardization of the professions."

The opposition to Stevens' amendment was led by Committee Chairman Bob Packwood (R-OR). "Professional associations are honest and decent but as they see it often isn't the way the public sees it," Packwood said. He contended that state medical and bar associations are "hardly ever" regulated by the states.

Sen. Robert Kasten (R-WI), chairman of the committee's subcommittee on the consumer which handled the FTC legislation, said he supported the Stevens proposal because the FTC over the past few years "has directly overridden state regulatory programs." The agency, he said, "has gone beyond the general guidelines of what we would like to have from it."

Voting for the amendment were Sens. Stevens, Kasten, Barry Goldwater (R-AZ), Harrison Schmitt (R-NM), Larry Pressler (R-SD), Ernest Hollings (D-SC), Daniel Inouye (D-HI), Wendell Ford (D-KY), James Exon (D-NE), and Howell Heflin (D-AL).

In opposition were Sens. Packwood, Slade Gorton (R-WA), Nancy Kassebaum (R-KS), Howard Cannon (D-NV) and Donald Riegle (D-MI).

A few days before the Senate committee vote, the AMA and seven other professional organizations had sent a telegram to President Reagan urging support for their position against FTC jurisdiction, since this would be "consistent with your goals of reducing federal regulation, restoring power to the states and relying more on private sector responsibility."

"This is a matter of major importance to all professional groups, and we are concerned that this administration appears to be unresponsive," the telegram concluded.

Signing were the AMA, the American Dental Association, the American Optometric Association, the American Veterinary Medical Association, the National Society of Professional Engineers, the American Institute of Architects, the American Consulting Engineers Council, and the American Society of Civil Engineers.

The House Commerce Committee is expected to take up the questions of FTC reauthorization and ju-

risdiction soon. There is a strong drive in the House behind a measure (H.R. 3722) by Reps. Thomas Luken (D-OH) and Gary Lee (R-NY) that would impose a moratorium on FTC's actions against the professions. Almost 200 House members have co-sponsored the bill.

The Stevens amendment before the Senate committee was patterned after legislation (S. 1984) introduced by Sens. James McClure (R-ID) and John Melcher (D-MT), two leading Senate proponents of restricting the FTC's scope over the professions.

The legislation is given a good chance of clearing Congress if opponents do not succeed in keeping it from floor votes in House and Senate.

Block Grant Proposed for Health Planning

The House Commerce Committee has formally adopted a proposal to place federal health planning into a block grant to the states, stripping most centralized control from the controversial program.

The action came on an amendment by Reps. Richard Shelby (D-AL) and Edward Madigan (R-IL) over the initial opposition of Rep. Henry Waxman (D-CA), chairman of the health subcommittee.

The program would be kept alive for two more years with funding of \$64 million next fiscal year. However, the nature of the program would be changed significantly with the states and localities given a much freer hand and many current restrictions lifted.

The certificate-of-need (CON) requirements in present law would be liberalized greatly, with the CON for capital expenditures put at \$5 million in comparison with the present \$600,000. The CON for institutional health services would be set at \$1 million.

Strongly opposed by the AMA, the planning program, which is up for reauthorization this year, has been a target of the Reagan administration which wants to phase it out.

The Senate Labor and Human Resources Committee on a tie vote last month blocked a proposal to continue and revise the planning program.

Feds Drive to Collect School Loans

The government has reported progress in collecting overdue school loans from health professionals and announced new steps to improve collection and prevent abuses.

As a result of a crackdown on overdue loans, 80 physicians employed by the Health and Human Services (HHS) Department were discovered to be delinquent and notified they will be disciplined unless payments are brought up-to-date immediately. A review by HHS Inspector General Richard Kusserow also found 83 delinquent physicians associated with medical schools.

Kusserow said six medical schools have increased

collections by almost 250%. More than \$5 million in delinquent loans could be erased within one year at that rate, Kusserow said.

The review revealed \$30.6 million in delinquent loans with more than \$5 million owed by physicians.

New regulations will establish new delinquency rate ceilings for schools and penalties for exceeding the ceilings. The Public Health Service Student Financial Aid guidelines are being revised to require schools to go to court to recover loans if necessary.

Sen. Charles Percy (R-IL) has introduced legislation that would allow the Internal Revenue Service to release current addresses of delinquent borrowers to the schools holding the loans.

SSA Proposes New Disability Standards

The Social Security Administration has proposed new medical standards to be used in evaluating disability claims.

The slightly tighter medical standards, published recently in the Federal Register for 60-day comment, are not related to the more rigorous standards announced last year for the disability program as a whole. Significant reductions to the number of beneficiaries are expected under the program.

The revisions on the listing of impairments reflect advances in medical treatment and diagnosis and Social Security's experience in evaluating claims. They are not based on any changes in the law.

Of the 13 body systems in the listing, changes are proposed in all but two—skin disorders and genitourinary.

Significant changes are recommended for respiratory, musculoskeletal, cardiovascular, digestive, hemic and lymphatic, neurological and neoplastic. Less significant are changes for special senses and speech and the multiple body systems listing. Minor changes are proposed for mental disorders and endocrine systems.

Slight changes also are proposed for the listing of impairments used in evaluating children under age 18 for Supplemental Security Income disability claims. The changes are for musculoskeletal, special senses and speech, genitourinary, mental and emotional disorders, and neoplastic disease.

HMOs To Become More Competitive

The administration is considering legislative proposals to make health maintenance organizations (HMOs) more competitive. Frank Seubold, Ph.D., director of the HMO office, said a major question to be decided is whether separate legislation should be sought or whether to place the HMO law amendments with the overall pro-competition bill.

The HHS Department is working on a number of changes, Seubold said, but he stressed that none of

them yet have reached the stage of final adoption as departmental policy by HHS Secretary Richard Schweiker.

Among the types of changes under scrutiny at HHS are proposals to give HMOs a free hand in charging members for services on top of the prepaid fee. At present, HMOs are limited to a nominal extra charge. In addition, staff people are considering dropping or easing the requirements for mental health and substance abuse services by HMOs. Another change designed to make HMOs more competitive with indemnity insurance would be to allow the organizations to vary their membership charges among their members, taking into account age, health status, etc.

Although the administration wants to chop the HMO loan program to a bare minimum, officials say they still wish to encourage private development of the plans.

Peds Nix Shot Cuts

Administration-proposed economies in the childhood immunization program could prove "costly and cruel," an official of the American Academy of Pediatrics has warned the Senate.

Vincent Fulginiti, M.D., chairman of the Academy's Committee on Infectious Diseases, also criticized "sensationalized medical accounts of vaccine side-effects" that show evidence of frightening parents about pertussis vaccination.

Dr. Fulginiti told a Senate labor and human resources subcommittee that the delivery of vaccines to children "would be reduced to intolerably low levels" if there is no increase in the \$28.8 million sought by the administration for the immunization program next fiscal year. The 7% cut imposed on the program this year comes at a time when the cost of vaccine has increased 44% over the past two years, he said.

"Based on past experience, these cuts proposed by the administration would prove terribly costly and cruel—costly in direct dollar terms to all of our citizens for many years to come, and cruel to the unfortunate victims and their families for a lifetime," said Dr. Fulginiti.

The danger was disputed by William Foege, M.D., director of the Centers for Disease Control (CDC), who said the immunization program has become more efficient and the backlog of immunizations has been eliminated, making it possible to reduce costs. Dr. Foege also said he has been assured by HHS Secretary Richard Schweiker that the immunization program will be carefully monitored for adverse effects.

Gorks Must Get Full Rx, Says H₂S

HHS Department has sent notices to all hospitals warning that loss of federal Medicare and Medicaid payments could result from denial of treatment to the handicapped.

The letter was a result of the publicized "Infant Doe" case in Indiana where a deformed baby was allowed to die.

HHS Secretary Schweiker said "the President has instructed me to make absolutely clear to health providers in this nation that federal law does not allow medical discrimination against handicapped infants."

The letter said in part that "a recipient may not lawfully decline to treat an operable life-threatening condition in an infant, or refrain from feeding the infant, simply because the infant is believed to be mentally retarded."

High Court to Review Abortion Statutes

Nine years after its historic decision limiting states' rights to outlaw abortion, the Supreme Court has agreed to review restrictive statutes in three states.

Both pro-abortion and anti-abortion forces said they hoped the Court's ultimate decision—not likely until late this year or next year—will bolster their causes. The Supreme Court is considered more conservative today than it was in 1973 when it held 7-2 that states could not prohibit abortions during the first trimester of pregnancy.

However, none of the three cases before the Court—from Virginia, Ohio and Missouri—appeared to pose a head-on challenge to the earlier ruling that touched off the national controversy that continues to rage.

announcements

CALENDAR OF MEETINGS

NATIONAL

Aug. 2-5	National Medical and Dental Association—Pinehurst, N.C.
Aug. 21-25	American Pathology Foundation—Greenbrier, White Sulphur Springs, W. Va.
Sept. 12-15	International Society of Pediatric Neurosurgery—Children's Hospital, Philadelphia
Sept. 13-16	International College of Surgeons—Resorts International, Atlantic City, N.J.
Sept. 20-23	American College of Radiology—Sheraton, Boston
Sept. 24-26	Southern Medical Association Regional Postgraduate Meeting—Marriott Hotel, New Orleans
Sept. 25-Oct. 1	American College of Emergency Physicians—St. Francis Hotel, San Francisco
Sept. 27-Oct. 3	American Group Practice Association—Marriott, Chicago
Sept. 29-Oct. 2	American Neurological Association—Washington Hilton, Washington, D.C.
Sept. 29-Oct. 2	American Society of Human Genetics—Detroit Plaza, Westin, Detroit
Sept. 30-Oct. 3	American Society of Internal Medicine—Palmer House, Chicago



SOUTHERN MEDICAL ASSOCIATION...

Dial Access is Southern Medical's answer to problem-solving CME.

Dial Access is a toll-free continuing medical education service to physicians, consisting of 8-10 minute recorded messages explaining the most recent therapeutic and diagnostic findings on specialized medical problems. Dial Access is available to SMA members for only \$5.00 per year (non-members, \$25.00 per year). Included in the subscription cost are: Ready Reference Catalog with continual updates of the 1,000 audio tapes, a quarterly newsletter, and a 24-hour a day, 7-day a week toll-free number providing you with complete information in eight disciplines:

- Arthritis & Rheumatism
- Infectious Diseases
- Obstetrics & Gynecology
- Cancer
- Gastroenterology
- Diabetes & Endocrinology
- Psychotherapeutics
- Cardiovascular Disease

Subscribe NOW and receive your Ready Reference Catalog and your I.D. number.

Write or call: Barbara Bedford, SMA, PO Box 2446, Birmingham, Alabama 35201, (205) 323-4400.

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

Sept. 20-24	Internal Medicine Review (40 hours)
Oct. 6-8	Recent Advances in Blood Banking
Oct. 7-10	Annual Frontiers in Nutrition Seminar (10 hours)
Oct. 15	Pain Management Workshop
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions
Oct. 29	Symposium on Leukemia and Lymphomas (7 hours)
Nov. 4-6	American Society for Microbiology Fall Meeting, Scientific Sessions
Nov. 17-19	Tennessee Public Health Association Annual Meeting, Scientific Sessions
Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
Chest Disease	Kermit R. Brown, M.D.
Dermatology	Qamar A. Kahn, M.D.
Gastroenterology	Joseph M. Stinson, M.D.
General Medicine	Paul A. Talley, M.D.
Hematology/Oncology	Edward A. Mays, M.D.
Neurology	Thomas W. Johnson, M.D.
Obstetrics and Gynecology	David Horowitz, M.D.
Ophthalmology	Ludwald O. P. Perry, M.D.
Orthopedics	Buntwal M. Somayaji, M.D.
Pathology	Edward A. Mays, M.D.
Pediatrics	Robert S. Hardy, M.D.
Surgery	Calvin L. Calhoun, Sr., M.D.
General	Gregory Samaras, M.D.
Neurological	Henry W. Foster, M.D.
Thoracic and Cardiovascular	Axel C. Hansen, M.D.
Urology	Wallace T. Dooley, M.D.
	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
	E. Perry Crump, M.D.
	Louis J. Bernard, M.D.
	Charles E. Brown, M.D.
	David B. Todd, M.D.
	Ira D. Thompson, M.D.
	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

Aug. 2-6 Practical Skills Workshop
Sept. 23-24 Newborn Conference
Oct. 1-2 Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)

Knoxville

Nov. 6-7 Loss Prevention

World's Fair

Aug. 19-21 Cardiology Update (M)
Sept. 2-4 Perinatology for Practitioners (M)
Sept. 9-11 Perspectives in Medical Genetics—1982 (M)
Oct. 13-15 3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology (K)
Oct. 21-23 Office Ultrasound (K)
Oct. 27-30 Cancer Concepts (K)
(K) Contact the Knoxville office for information.
(M) Contact the Memphis office for information.

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

TENNESSEE ACADEMY OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY

Aug. 29-Sept. 1 Otolaryngology Assembly (Annual Tri-State Assembly), in conjunction with the annual meeting of the North Carolina and South Carolina Societies of Otolaryngology and Maxillo-Facial Surgery—Knoxville Hilton, Knoxville. *Fee:* Nonmembers \$200; members and residents \$75. *Credit:* 12 hours AMA Category 1.

For information contact Milton G. Yoder, M.D., 204 Fort Sanders Professional Bldg., 501 20th St., Knoxville, TN 37916.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

Mini-Residencies in Office Management of Emotional Problems

The objective of this course is to give physicians an ideal emotional counseling technique that fits busy office practices.

The technique uses a concept of emotions that is consistent with human anatomy and psychophysiology. Yet, the technique requires no more physician time or patient cost than routine evaluations of new patients. Finally, the technique is readily understandable and easy for practitioners to apply.

One, two and three week courses. Minimum of 40 hours per week. *Tuition Fee:* \$350 per week for the 1st and 2nd week of training; \$500 for 3rd week of supervised practice with patients in the Intensive RBT Treatment Program.

For further information contact Maxie C. Maulsby, Jr., M.D., Office of Continuing Medical Education, Dept. of RBT, University of Kentucky, Lexington, KY 40506.

Continuing Education Schedule

Oct. 31-13th Family Medicine Review—Session III
Nov. 5

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

MEDICAL COLLEGE OF VIRGINIA

Aug. 5-7 Pediatrics at the Beach, 4th Annual Pediatric Primary Care Conference—Sheraton Beach Inn, Virginia Beach, Va.

For information contact Kathy E. Johnson, Box 48, MCV Station, Richmond, VA 23298, Tel. (804) 786-0494.

INT'L. LIFE SCIENCES INSTITUTE

Symposium on Diet and Hypertension

Sept. 13-15 Nutrition and Blood Pressure Control (cosponsored by the National Kidney Foundation and the U.S. Department of Health and Human Services)—Stouffer's National Center Hotel, Arlington, Va.

For information contact International Life Sciences Institute, Suite 600, 900 17th St. N.W., Washington, DC 20006, Tel. (202) 659-0074.

OF SPECIAL INTEREST

MEDICAL COLLEGE OF GEORGIA

Aug. 2-6 Taxes and Investments—Hilton Head Island, S.C.
Aug. 9-11 High Risk Obstetrics—Kiawah Island, S.C.

For information contact Division of Continuing Education, Medical College of Georgia, Augusta, GA 30912, Tel. (404) 828-3967.

Definition of Competition

Resolution 84 (A-81), which was referred to the Board of Trustees by the House of Delegates, requested the development of a working definition of the term "competition" as it pertains to medicine, medical practice and related congressional initiatives. The Board requested the Council on Medical Service (CMS) to respond to this directive. Therefore, this report (1) presents a general definition of competition, (2) applies this definition to the market for medical services to determine which elements of competition are either inappropriate or require qualification in the medical context, (3) develops a working definition of competition related specifically to the market for medical services, and finally (4) examines the effects of increased competition in the medical marketplace.

Introduction

In recent months, the term "competition" has been used in many contexts related to the health care sector. "Competition" has been defined in a specific sense when referring to current "pro-competition" legislation, and in a broader context when referring to a system of markets unrestrained by regulation.

The two uses are related in that the broader definition includes the narrow usage. This report will indicate the relationship between the legislative proposals and a more general competitive approach to structuring the medical services marketplace.

"Consumer-choice" bills are one type of legislative proposal in this general area. These bills are directed toward increasing the cost-consciousness of consumers at the point of purchasing medical services and paying health insurance premiums. Certain of the "pro-competition" bills go a step further by proposing changes in medical licensure and other aspects of the health care delivery system.

The major reason for increased interest in competition is concern over rising health care costs. In the past, government policymakers have responded to "crises" in the health care sector with extensive federal and state regulation. The current cost issue has again raised the possibility of extensive regulatory intervention and, in addition, has led to a search for possible alternatives. Principal among these is competition. Under certain conditions specified below, "competition" or "market forces" will lead to a self-adjusting system that *provides medical services*

demanded by consumers in the most cost-effective manner possible.

This potential effect on cost-effectiveness has caused government policymakers to consider competition as a possible solution to the problem of rising health care costs. The expectation is that increased competition may be able to effect the cost control that restrictive regulation of the health care system has been unable to accomplish. However, the Association must carefully balance cost concerns against considerations of quality and access in examining the competition issue.

A General Definition of Competition

Before applying the definition of competition to medicine specifically, it is useful to present a definition that applies in general to any market.

Competition refers to the degree to which a market is characterized by the following conditions: a large number of buyers and sellers, no restrictions on buyers and sellers entering the market, sensitivity among buyers about price, sensitivity among sellers about the costs of providing services, complete information for buyers and sellers.

If all of these conditions are met, a market is said to be perfectly competitive. In this case, services demanded by consumers are, theoretically, provided in the most effective manner possible. However, it must be emphasized that perfect competition is an ideal that does not characterize any existing market. To the extent that a market departs from perfect competition, the cost-effectiveness with which services are provided is reduced.

Competition in the Market for Medical Services

In applying this definition to the market for medical services, it must be emphasized that cost-effectiveness is not the only criterion for evaluation. *Quality* of and *access* to care must also be carefully considered. For this reason, each of the conditions underlying competition must be examined in relation to the medical services market from the perspectives of cost-effectiveness, quality of care, and access to care.

Condition 1: A Large Number of Consumers and Physicians

During the last two decades, the supply of physicians, allied health personnel, and hospital services has increased sharply. The supply of health manpower, examined in detail in Board of Trustees Report C now before the House of Delegates, is a major influ-

This is AMA Council on Medical Service Report N, submitted to the House of Delegates at its Interim Meeting in December, 1981. Past House Action: A-81:51-62, 234; A-79:106-107; I-78:61-62; A-78:30,143.

ence on the degree of competition in the medical services market. Evidence suggests that supply increases since 1970 may have given rise to substantial levels of competition in the present market for medical services. Further, the number of medical students already in the educational system will accelerate this trend in the coming decade.

Increases in the available supply of medical services will improve access to care delivered. In addition, the number of physicians has risen without any apparent deterioration in the quality of services delivered.

This key condition in a competitive market is consistent with current AMA policy which states that there should be no limit on the number of properly trained practicing physicians. The size of the physician population should be determined by individual choice.

Condition 2: No Restrictions on Entry Into the Market

Since the turn of the century, medicine has been practiced under state licensing laws that prescribe the educational standards for entry. Society has made a decision, evidenced by the licensing legislation, that the unique elements of medicine related to the alleviation of pain and preservation of health require a minimum level of education and experience. That is, the positive consequences of less-restricted entry are, in the mind of the public, outweighed by the accompanying erosion in the quality of care. However, certain "pro-competition" bills contain proposals that relax restrictions on entry into the market for medical services. Clearly, proposals such as these are currently and will continue to be strongly opposed by the Association.

Condition 3: Price-Consciousness Among Consumers

Increasing price-consciousness among consumers both in terms of care received and insurance purchased is the component of competition specifically addressed by most proposals in the "consumer choice" bills. This area is also the focus of recommendations made by the National Commission on the Cost of Medical Care which were adopted as AMA policy in Board of Trustees Report A (A-78). In addition, the specific proposals included in Board of Trustees Report L (A-81) also favor increasing consumer cost-consciousness by altering the structure of health insurance. Therefore, the desirability of increasing consumer sensitivity to the costs of medical care is already an element of Association policy.

A major effect of increased price-consciousness among consumers is improved cost-effectiveness. There should be a reduction in patient demand for unnecessary medical care and increased pressure for more diverse health insurance packages. In addition, consumers will play a more active role in determining the levels of quality and quantity of the care they receive because these decisions will affect directly their out-of-pocket costs.

However, increases in cost-effectiveness must again be balanced against access and quality considerations: (1) For certain population segments (such as the poor and the aged) increased price-consciousness may reduce access to needed care because plans with sufficient benefits cannot be afforded. (2) Excessive price-

consciousness may cause consumers to either forego needed care or seek care from unqualified providers. In sum, careful consideration should be given to proposals aimed at increasing consumer price-consciousness while doing everything possible to preserve the quality of and access to medical services.

Condition 4: Cost-Consciousness Among Physicians

Physicians will experience more direct incentives to provide cost-effective medical services as consumers become more price-conscious. Consumers in a competitive market will "shop" for (1) lower-priced health insurance plans with similar benefits [these may include conventional insurance plans or the financing mechanisms in alternative forms of physician organization such as Health Maintenance Organizations (HMOs) and Independent Practice Associations (IPAs)]; (2) medical services provided at lower cost [physicians who are more cost-conscious and provide more cost-effective services will then, theoretically, experience greater patient loads. The resulting reductions in demand for physicians charging higher prices will create incentives for them to become more aware of the costs of services they provide].

The desire to reduce the cost of providing medical services by physicians will improve efficiency. This element of competition is supported by AMA policy that calls for expanded economics curricula in medical schools and encourages price-consciousness among physicians (Board of Trustees Report A, A-78, Board of Trustees Report VV, A-79). Once again, however, care must be taken to avoid creating incentives to "cut corners" in providing services, thereby lowering the quality of care delivered.

Condition 5: Complete Information for Consumers and Physicians

Because of extensive health insurance coverage and prevailing reimbursement mechanisms, physicians and patients have had relatively little direct incentive to obtain information about the market for medical services. Increased competition will create incentives for both physicians and patients to obtain more information before making decisions on providing and receiving medical services. (1) Physicians will seek more information on possible practice location including the number of physicians already practicing and the availability of hospital resources. (2) Prospective medical students will seek more complete information on the professional and economic rewards of a medical career. (3) Newly graduated medical students will be interested in information on the demand for various specialty services. (4) Patients will seek information not only on physician practice characteristics but also concerning their own health status.

An increase in accessible, accurate information for both physicians and patients will improve cost-effectiveness in the medical services market. The AMA has adopted as policy recommendations of the National Commission on the Cost of Medical Care which would improve the type and availability of information on physician practice and health status for consumers (Board of Trustees Report DD, I-78 and Report A, A-78). An ongoing function of the Association is to collect socioeconomic information on the

medical services market and make it readily accessible to both physicians and the public.

A Working Definition of Competition in the Market for Medical Services

The five conditions discussed above are the basic elements which will determine the degree of competition in the health care system. These conditions, if implemented, provide a basis for making the health care system more cost-effective but may create concerns in other areas. Proposals to increase competition in the medical service market must, in all instances, strike a sensitive balance among considerations of cost-effectiveness, access and quality. Therefore, the competitive approach should draw on the strengths of market functioning but recognize the social responsibility of physicians to provide patients with quality care.

Present Association policy supports a market with elements of competition that place no limit on the number of properly trained physicians, increase price-consciousness among consumers, promote cost-consciousness among physicians, and improve the accessibility of information for both physicians and consumers. *These elements form a working definition of competition in the market for medical services that is based on current policy of the AMA.*

Effects of Increased Competition

The market for medical services is currently in flux and will change even more rapidly in the future. A major cause of this change is the growing fiscal pressure on federal and state governments to curtail health expenditures. The presence of increased competition may cause some physicians and patients to alter their behavior in response to this changing environment.

The Council believes that all physicians should clearly recognize that increased competition in the market for medical services will not occur without stress. For some physicians, this could result in location and specialty choices in areas of low supply/high demand or development of more efficient practice organizations. In contrast, physicians who do not respond to shifting incentives may bear directly adverse consequences.

Recommendation

The Association's current policies, in the view of the Council, support a medical services market with increased emphasis on cost-effectiveness—as long as that emphasis is balanced by a strong sensitivity to safeguarding the nation's access to high quality medical care.

YOUR JOB IS MEDICINE

However, there is a business side to the practice of medicine.

OUR JOB IS . . .

business consulting and financial management specifically for physicians. A principal of our firm is married to a physician.

Our services include ideas or methods regarding:

Office Sharing & Expenses
Pension/Profit Sharing Plans
Tax Alternatives
Accounts Receivable
Renting vs. Building

Pros & Cons of a P.C.
Practice-building Techniques
Offer To a New Physician
Sale of a Practice

Nashville
2120 Crestmoor Road
Nashville, TN 37215
(615) 383-3289



Memphis
5100 Poplar Ave. Suite 2812
Memphis, TN 38137
(901) 685-8305

Initial Consultation at No Charge

the Consulting Group

Daytime and Evening Hours

It's just what the Doctor ordered!

Registered Medical Assistant Educational Seminar

August 17-19, 1982

Opryland Hotel, Nashville

Send your medical assistant to

- *attend scientific seminars for medical assistants only
- *maintain professional competency
- *meet associates from all over the U.S.
- *increase your office efficiency

For a complete schedule of seminars and a registration form, contact the Registered Medical Assistant Program 710 Higgins Rd., Park Ridge, IL 60068, 312/823-5169.

Reduced fee for registering prior to the convention!

FAMILY PHYSICIANS NEEDED

Morris, Alabama

Unique opportunity for one or two primary care physicians to fill vacancy in Morris, Alabama, 15 miles north of Birmingham. Practice is in second year and partially established. Salary \$42,000 to \$65,000 for physicians who want to establish own private practice. Present facility is new and 2,200 square feet, completely furnished with new equipment, including x-ray and lab. Fringe benefits include health, life, disability, retirement, malpractice, three weeks vacation, two weeks continuing education and sick leave. Management services include personnel, payroll, tax reports and billing.

If interested, please contact Health Development Corporation, P.O. Box 1486, Tuscaloosa, Alabama 35403, or telephone Frank Cochran *collect* at 205-758-7545.

RENT MY CONDOMINIUM* AT HILTON HEAD ISLAND SOUTH CAROLINA

For more information contact:

Tom Reed
Attention: Mrs. Parton
117 East Main Street
Murfreesboro, Tennessee 37130
Telephone: (615) 890-6464

*Ocean Front—2 Bedrooms

FAMILY PRACTICE S. W. Missouri

Modern and progressive 50-bed hospital. Good coverage and financial guarantees. Small community in the Ozarks close to medium size city.

For information contact:

Karlman Associates
680 Beach St., Suite 348
San Francisco, CA 94109
Telephone: (415) 775-1657

CENTER HILL LAKE Home for Sale

Get away from it all in a beautiful, secluded setting only 1½ hours from Nashville. Completely furnished, 3 bedrooms, 2 baths, greatroom with fireplace, fully equipped kitchen, huge redwood deck with hot tub and a magnificent view of the lake. \$75,000. Gwynn Bradley 615-385-2064 in Nashville.

Mills and Company Realtors
615-383-1286.

SUPPORT YOUR ADVERTISERS

Many of the advertisers in this Journal are long-standing patrons of our monthly publication. Their products and services are of the highest quality available. Don't take them for granted. Read their ads!

Hemiplegia—An 11-Year Summary

WILLIAM T. SATTERFIELD, M.D.

Many of us can recall 20 years ago admonishing families of stroke victims to "take Grandma home, put her where she will least interfere with family daily activities, and call me when she has trouble or dies." These were harsh, condemning words, but nonetheless true. There, usually in a back room, the hapless victims awaited their inevitable fate of contractures, decubitus, pneumonia, sepsis, and eventual death. The physicians, therapists and nurses who later were to become involved in treating these and similar problems did not have the knowledge or physical or financial resources to respond differently. Today it is not unusual to see stroke victims return to ambulation and complete self-care, keeping house, swimming, bowling, driving, hunting, or fishing.

Several of the factors I feel most responsible for kindling our interest in rehabilitation are need, available financing, and the development of the multidisciplinary coordinated team approach.

Over a half million persons suffer strokes yearly in the United States alone. Because of our more sophisticated diagnostic modalities and our increasing expertise in treating the acute stroke, approximately 80% to 90% of these victims will survive. The quality of that survival, *not* the complete removal of the residual neurological deficit, is the ultimate goal of successful rehabil-

itation. While some stroke victims do return to gainful employment, for most, ambulation, wheelchair independence, and self-care with or without independent living are far more realistic goals.

There is little doubt that Medicare has been a financial godsend to rehabilitation programs. Before the advent of the Medicare Guidelines for inpatient hospital stays for rehabilitation services in 1972, few if any third-party carriers, including Workmen's Compensation, were overjoyed at expending \$150 to \$175 per day for those who were severely disabled and who in all likelihood would *not* return to the wage earner's role. The Division of Vocational Rehabilitation and the Crippled Children's Services were willing but unable to fill the void. Today, to my knowledge, there are only a few private carriers, such as the federal employee groups, that will not pay for inpatient rehabilitation services.

Everyone agrees that rehabilitative services are time-consuming and expensive, but it has been shown convincingly that monies thus spent are substantially less than what would have been required for long-term nursing care or repeated hospitalizations for treatment of many preventable complications.¹

In the latter part of 1970 the Baptist Memorial Hospital (Memphis) administration and medical staff perceived the need for a comprehensive Stroke Rehabilitation Unit much like the highly successful Spinal Cord Injury Unit opened by Dr. Robert Tooms at the Lamar Unit some 22 months previously. Six beds were allocated, emphasis was placed on procurement of adequately

From the Regional Rehabilitation Center, Baptist Memorial Hospital, Memphis.

Reprint requests to Regional Rehabilitation Center, Baptist Memorial Hospital, 1025 E.H. Crump Blvd., Memphis, TN 38104 (Dr. Satterfield).

trained therapists and nurses, and I was dispatched to Rancho Los Amigos Hospital for informal training under Dr. Vernon L. Nickel and associates. The purpose of this article is to share some of our experiences over the past 11 years.

Since April 1971, 2,764 patients have been discharged from the Stroke and Trauma Unit at the Regional Rehabilitation Center (formerly the Lamar Unit) of the Baptist Memorial Hospital. Of these, 180 have suffered brain trauma. Although the pathophysiology and treatment are quite different from those of stroke, they are included purely for statistical reasons.

Providing treatment only on the basis of physician referral eliminates the loss of valuable treatment time on those who have little or no rehabilitative potential either because of the severity of their neurological deficits, or because they have little motivation to improve their lot. No private duty nurses or overnight guests are permitted. Dressing (informal) and eating in communal dining rooms are required.

General information concerning the composition, operation, and psychology of our Stroke Unit have been alluded to in the previous six-year summary,² and for the most part the same format will be followed.

Of these 2,764 patients, 50.9% were male and 49.1% were female; 2,104 were white, 656 black, and 4 Oriental. Age varied from 7 to 97 years, with the average being 63 years, well below minimal Medicare age (Fig. 1). The average length of stay (33 days) increased slightly (Fig. 2), perhaps due to our increasing number of younger head injuries in the later years and our earlier post-stroke acceptance. Only 55% of our referrals were from Baptist Memorial Hospital attending staff, whereas 17% were from other in-town hospitals, 14% from hospitals or nursing facilities outside Memphis, and 14% outpatient referrals. This is a significant change in referral habits, and hopefully reflects our acceptance as a true Regional Rehabilitation Center.

Although 94% of our referrals were from the Mid-South (Tennessee, Mississippi, or Arkansas), some 20 other states from Delaware to California are represented. Again, 6.7% of our admissions would not remain for our rather physically demanding program, and 6.2% were too sick to complete the program and were transferred back to their acute hospital setting. The most frequent causes of transfer were car-

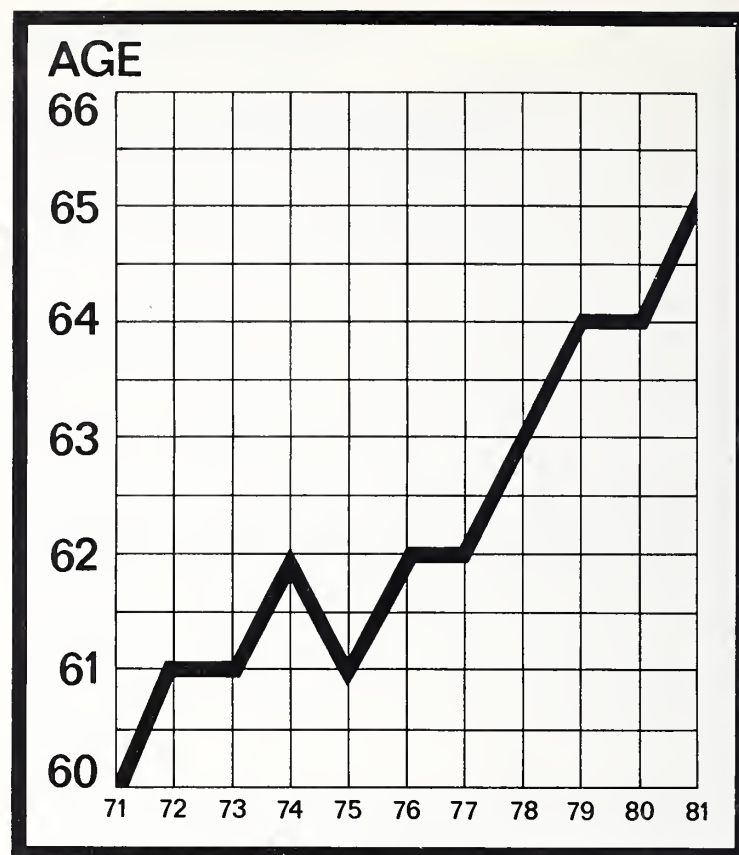


Figure 1

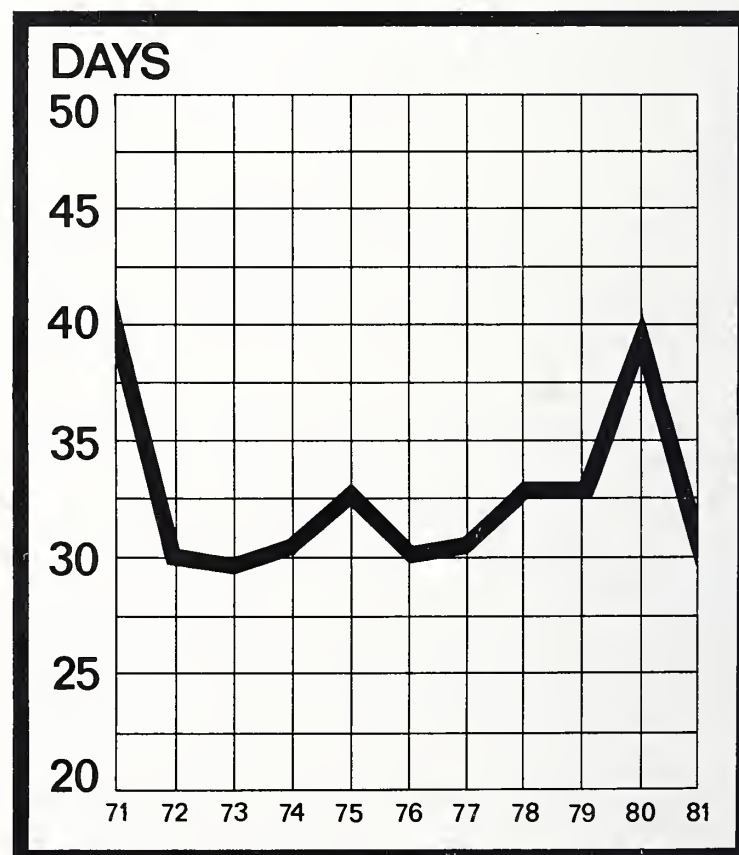


Figure 2

diovascular-respiratory (91), deterioration in neurological status (35), gastrointestinal (21), genitourinary (11), and other nonclassified causes (13). In our experience, the most common medical complication in the stroke patient has been acute pulmonary embolus with or without demonstrable peripheral thrombophlebitis. This is surprising, in view of our early ambulation and exercise, and the fact that over 21.1% of our patients were already on anticoagulants or platelet inhibitors at the time of admission. Our death rate on the unit remains at an acceptable level of 1.3% (37 of 2,764), although several more have died after transfer back to the acute setting. Our post-discharge suicide rate likewise remains exceedingly low (2 of 2,764), but understandably the true cause of death is frequently not divulged by bereaved families and accurate statistics of this nature are difficult to obtain. At discharge, 77% of our patients returned to homes with relatives or friends, 19.2% went to institutions, 3% to boarding home type environments, and 0.8% were lost to follow-up.

Ideally, we prefer transfer to our unit two to three weeks post-stroke. Some patients are mentally alert, have no significant medical complications, and transfer to us as early as four to five days post-stroke. Others, because of the necessity of learning or relearning some self-care skill, or because of ambulation problems requiring rehabilitative surgery or bracing, have been admitted as late as 18 to 20 years post-stroke. The large majority (77%) are admitted within 30 days of their initial episode. Surprisingly, only 8% of our admissions have had previous strokes, but of those, 70% had been treated at our facility for the original insult. In general, head trauma victims, because of their many complicating medical problems, are admitted somewhat later post-occurrence than our stroke victims. The only admission criteria that must be met are the ability to obey commands given either verbally or gesturally, the ability to bear weight on a fractured lower extremity or pelvis, and the absence of need for continuous intravenous fluids or medications.

As mentioned previously, 21% of our population were on either anticoagulants or platelet inhibitors, 31% were on antihypertensive medications, 15% had diabetes mellitus controlled by diet, diet and oral hypoglycemics, or diet and insulin, and 15% were on anticonvulsants.

Our experience with dantrolene sodium has almost tripled since 1977. We have used this drug

alone and in combination with diazepam and methocarbamol, and in most cases the desired results have not been forthcoming. Our experience with rehabilitative surgery has also broadened, but with better demonstrable results. Achilles tendon lengthenings, release of tight toe-flexor tendons, split anterior tibial transfers, posterior tibial releases, tendon slides and transfers, and muscle releases in the upper extremities are no longer little-known vernacular, reserved only for orthopedic surgeons, but have in appropriate cases become a ray of hope for those who desire to improve their upper extremity function or to walk.

The ability to communicate represents much more than the ability to express and understand words. It is also our primary means of establishing and maintaining our feelings of self-esteem, relating to others, and providing a purpose and meaning to our lives. As such, communication is an integral part of the quality of the individual's life. Conversely, the communicatively impaired individual experiences much more than a mere breakdown in his ability to understand and/or express words. He simultaneously experiences a breakdown in the quality of life.

Of the 2,764 patients discharged since April 1971, 38% were found to have a *speech disorder* resulting from dysarthria, oral apraxia, or verbal aphasia, and 38% were found to have a *language disorder* consisting of receptive aphasia (37%) and expressive aphasia (39%). Severe receptive aphasia was present in only 1%, whereas severe expressive aphasia was present in 17% of our aphasics. Eighteen percent of our patients exhibited language confusion characterized by reduced recognition and understanding of the environment, faulty memory, unclear thinking, and disorientation as to time and place. Unlike the aphasic patient, the patient with language confusion (often traumatically induced) elicits a high degree of irrelevance and confabulation in an open-ended language situation. This type of patient usually elicits a normal response in a structural language event.

Our patients fell within the following potential levels of communication abilities: 72% were within the community communicator level, the highest level of functional communication. A patient placed in this category is one whom you predict will be able to communicate with ease, both from the speaker and listener standpoint, in any communication situation. Sixteen percent fell within

the assisted communicator category. The patient in this category would be the individual who is able to verbally express his personal needs and feelings via noun, noun-verb, and/or short phrase communication. Patients using nonverbal communication devices are also placed in this category. Eleven percent fell within the sheltered communicator category. The patient in this category is unable to utilize a communication aid without the assistance of another. Only 1.4% of our patients appeared to have no communication potential. They were so severely afflicted that both verbal and nonverbal communication were precluded.

With regard to our outpatient services, 21% of the patients for whom continued speech and/or language therapy was recommended were able to return to the Regional Rehabilitation Center for outpatient therapy, whereas 79% obtained outpatient therapy from other sources.

With regard to the affected side, 47% of the patients had left hemiplegia, 46% had right hemiplegia and 7% were bilaterally involved. Fifty-five percent of our patients presented some type of visual perceptual problem. Of 1,246 patients screened for pure-tone audiometry, 24% presented inadequate hearing; 14% had a conductive component, 84% had a sensorineural component, and .04% were mixed. It should be noted that patients with hearing losses above the speech range (500-2,000 Hz) were considered to have adequate hearing for communication. These figures, therefore, do not reflect the large numbers of high frequency losses prevalent in this adult population.

With regard to handedness, 96% were right-handed, 3% were left-handed, and .73% were ambidextrous.

Twenty-one percent of our patients attended at least one year of college, 17% completed grades 1-6, 25% completed grades 7-9, and 35% completed grades 10-12. Many of our patients had received no formal education.

In conclusion, the purpose and goal of the rehabilitation of a communicatively impaired individual is to help him attain the highest quality of life possible.

Employing the seven stages of lower extremity muscle function by Brunnstrom,³ 84% of our patients fell into stages 3 through 7. Lower extremity sensation was involved in 50%; spasticity was

present to some degree in 61%; standing balance was judged good in only 42%; and range of motion was limited in 36%. Despite these somewhat dismal neurologic findings, 73% of our patients were able to ambulate at discharge. Most were independent or supervised (70%), whereas the remainder required some aid varying from minimal to maximum. Forty-one percent of our patients were community ambulators, while 43% were limited to household ambulation because of limited endurance and 15% were bathroom ambulators only. Orthopedic devices, e.g., braces, knee cages, wedges, were necessary in 24% of our series. The most common reason for bracing remains insufficient dorsiflexion of the foot, followed closely by mediolateral instability of the ankle. Fifty-three percent of our ambulators required some sort of mechanical device e.g., a cane, quad/walk cane, or walker. Wheelchairs were required in 52% of our patients despite our high overall ambulation rate. Seventy-five percent of our patients could transfer to and from bed, to and from toilet (73%), and to and from bathroom (64%).

Again, employing Brunnstrom's seven stages of recovery^{3(p34)} of upper extremity muscle function, only 66% of our patients fell into stages 3 through 7. Upper extremity sensation was impaired in 58%, spasticity was present in only 32%, and range of motion was limited in only 29%. In spite of these rather optimistic findings, the hand was functionally dependent in only 12%, whereas the arm was independent in only 19% of our cases. Upper extremity function was limited by edema (34%) and shoulder subluxation in 36%.

Thus, we can readily ascertain that muscle function, sensation, spasticity, and range of motion are not the only parameters that determine functional activity. Higher levels of intellectual function (cognitive functions) can be and frequently are affected by stroke or brain injury. Not only may man lose his ability to follow instructions given either verbally (65%), demonstrated (58%) or written (73%), but he may also lose his judgment (78%), his ability to attend a task (61%), or his ability to carry over skills from day or day (72%). In spite of these rather significant losses, he can be taught independence in feeding (61%), dressing (46%), personal hygiene chores (42%), communication (36%), and household/homemaking activities (33%), if he is so inclined. Only 101 (3.6%) of our patients were incapable of being taught to perform any of their self-care activities.

Two rather interesting but statistically insignificant observations have been made over the past several years. First, we have seen an alarming increase in the number of cerebral emboli occurring at or immediately following cardiac surgery, be it for coronary artery bypass grafts, valvular replacement, or commissurotomies of various types. No correlation can be found between occurrence and surgeon, hospital, anesthetic employed, procedure performed, or length of surgery. Let's hope this increase is solely related to the increasing number of cardiac procedures now being performed. Second, all of our young female stroke victims of thromboembolic phenomena from contraceptive drugs have had involvement of the left middle cerebral artery or its branches resulting in a right hemiplegia and varying degrees of aphasia. My neuroanatomist and neuropathologist colleagues can offer no feasible medical explanation, but 100% (9 for 9) appears more than mere coincidence. Further study along both these lines with the ultimate goal of prevention is certainly indicated.

Several new modalities have been added to our curriculum. One of these is driver education for the handicapped, which has opened innumerable pursuits for those previously dependent on others for transportation. In general, only four factors prevent the handicapped from driving. These are severe apraxia or physical impairments such as limited range of motion bilaterally, poor judgment, history of seizure activity within the past 12 months, and significant visual or visuo-spatial disturbances.

Recently we have added the services of a nurse

clinician to our armamentarium. As home coordinator she visits recently discharged patients within their own environment to ascertain acceptance or rejection of the handicap by both the patient and family members, the presence and subsequent hopeful elimination of any existing architectural or emotional barriers, and the rapid and proper deployment of the patient to appropriate community resources, including speech and hearing centers, public health services, home health services, the Division of Vocational Rehabilitation, local stroke clubs, and the Social Security Administration. Because of her proficiency in physical examination and diagnosis, she is of invaluable aid to the attending physician in preventing more serious medical complications that might have ensued had the condition continued undetected. These visits are usually made two to four weeks post-discharge, and cover a radius of up to 75 miles from the Regional Rehabilitation Center. There is usually only one visit unless specifically requested by the attending physician.

The changing complexities of our society demand an increasing sense of moral responsibility on the part of physicians and ancillary medical personnel⁴ to provide the chronically ill patient the same level of medical excellence expected for the acute or critically ill.

REFERENCES

1. Affeldt J E: *Report of the Specialized Center's Concept Meeting*. Rancho Los Amigos Hospital, Downey, California, Jan. 13-15, 1971, p. 4.
2. Satterfield WT: Hemiplegia—A six-year summary. *J Tenn Med Assoc* 70:631-633, 638, 1977.
3. Brunnstrom S: *Movement Therapy in Hemiplegia*. New York, Harper and Row Publishers.
4. Nickel VL: The institutional setting for rehabilitation. *South Med Bull* 55:18-23, March 1967.

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

The Nashville Academy of Medicine

"Yankee Gunboat" Gavel

ROBERT W. IKARD, M.D.

"A gavel presented Academy by Mr. James Sager." As recorded in the handwriting of secretary Sam P. Bailey, so reads the last sentence of the minutes of the May 3, 1927, meeting of the Nashville Academy of Medicine. It is surprising that no elaboration on the gavel's origin was given, for tacked to the gavel's head is a plaque referring to an obscure and unusual battle in the War Between the States. It says:

Made From White Oak Timber From A Gunboat
Sunk By The Cavalry of Gen. N. B. Forrest In The
Tennessee River At Johnsonville Tenn 1862
Presented To Nashville Academy of Medicine
By J.M. Sager. 1927

Why was the Nashville Academy of Medicine the recipient of such an unusual gift? More intriguing, why did one of the most daring and successful cavalry leaders in history allegedly join in a naval battle? The search for answers to these queries leads to exciting events and unique people about which there is little general knowledge.

The Gavel

James M. Sager was both a laboratory and radiology technician. According to his wife, he helped install some of the first roentgenographic equipment in Nashville in the 1920s.

As a laboratory assistant, Mr. Sager worked closely with William Litterer, Jr., Ph.D, M.D., a noted bacteriologist who made many interesting scientific contributions. During World War I, a gas developed by Litterer was used in the trenches at Chateau-Thierry. He also contributed sera for trench fever and influenza during the Great War.¹ Litterer Laboratories was one of only three in the United States to do early testing on Salvarsan and one of the earliest to produce the Pasteur vaccine for rabies.²

From the Department of Surgery, Vanderbilt University Medical Center, Nashville.

Reprint requests to 300 25th Ave, North, Nashville, TN 37203 (Dr. Ikard).

Mrs. Sager believes her husband's great admiration of Dr. Litterer, then an Academy member, prompted Mr. James Sager to donate the gavel, but there is no known record of his motive, and he died in 1945.

It is unclear who actually made the mallet. Mrs. Sager, who married her husband shortly before the gavel was given, thinks her father-in-law carved it. Mr. Ovel Morton Sager, a tool and dye maker originally from Dickson County, was said to be "artistic" and fashioned many items of woodwork such as the gavel.

The gavel (Fig. 1) is of standard, tasteful, though unremarkable design. Its hardwood is walnut stained. A finely tapered and knurled handle fits in a balanced fashion into a head decorated with symmetrical grooves of varying size. The flat functional surfaces are pitted from 55 years of pounding.

The Battle

In October, 1864, General Grant held Petersburg and Lee's Army of Virginia in siege. This stalemate allowed aggressive Federal advances by the troops of Gens. Philip Sheridan in the Shenandoah Valley and W. T. Sherman in the Southeast.³ Sherman, having occupied Atlanta, was dependent on a long and tenuous supply line from Louisville through Nashville,⁴ and it became an aim of Major General Nathan B. Forrest to cripple this supply line by destroying the important Tennessee River port facility at Johnsonville (named for Military Governor Andrew Johnson), Tennessee. This had been the only predictable Federal supply conduit to Nashville via the Nashville and Northwestern Railroad, and Forrest set out to "expose its hitherto-unnoticed vulnerability."⁵ While in West Tennessee, he hoped to garner supplies and rest his men and horses.

On Oct. 29, the Confederates set up artillery on the west side of the Tennessee River at Fort Heiman and Paris Landing near the Kentucky-



Figure 1. The Nashville Academy of Medicine Gavel.

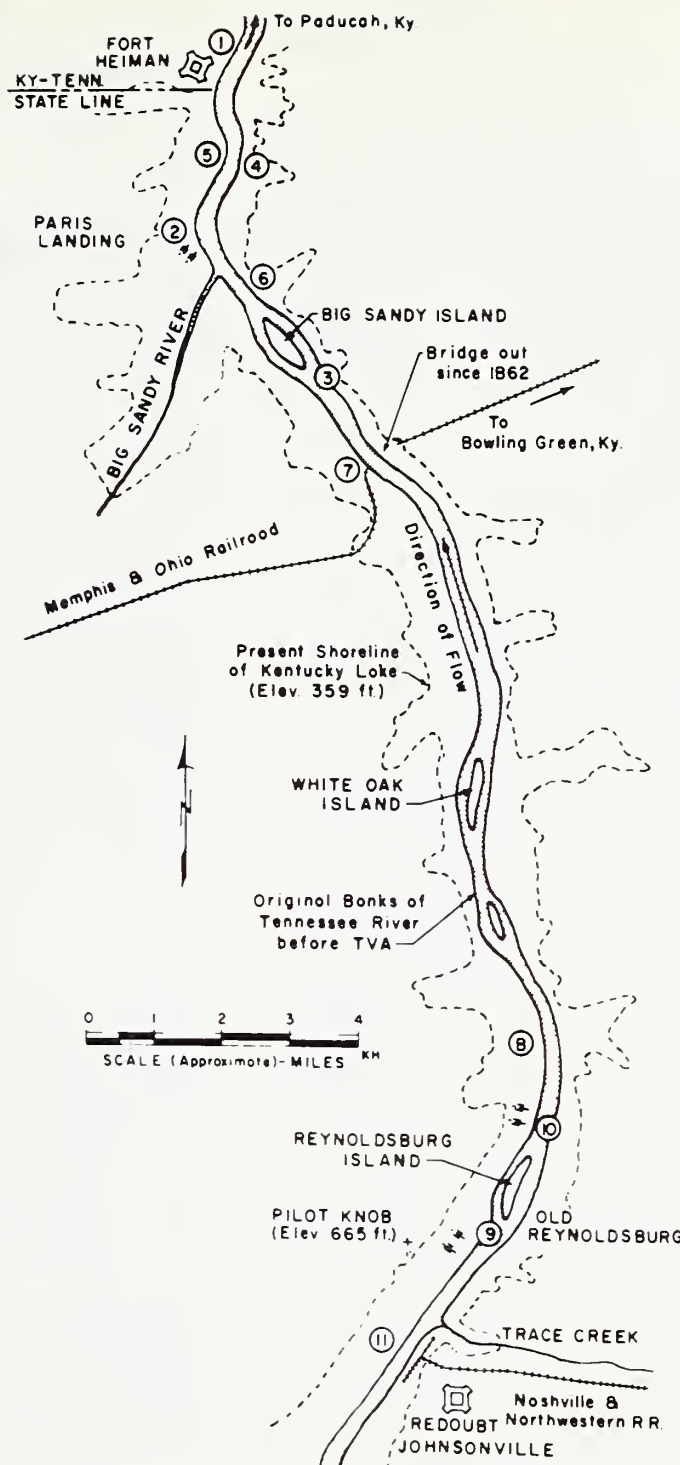


Figure 2. Forrest's Johnsonville Campaign of 1864 (from Williams and Hymphreys⁴).

- Oct. 28 - Confederates set up artillery at Ft. Heiman (1) and Paris Landing (2), five miles apart by river.
- Oct. 29 - Steamer "Mazeppa" captured (1)
- Oct. 30 - Steamer "Anna" badly damaged (1) but escapes toward Paducah. Gunboat "Undine" at Big Sandy Island (3) hears firing and comes downstream. After engaging guns at Paris Ldg. (2), "Undine" moves to (4) and is trapped. Transports "Venus" and "Cheeseman" with barge, pass guns (2) later and are also trapped with "Undine" (4). Confederates move up artillery reinforcements (5) and capture all three boats. Gunboat "Tawah" comes downstream to (6) and engages Confederates, but withdraws when sharpshooters get close.
- Oct. 31 - Confederates repair "Undine" and "Venus". "Cheeseman" is considered beyond repair and is destroyed.
- Nov. 1 - Confederate "Fleet" and land forces move south to (7) before stopping for the night.
- Nov. 2 - "Venus" gets too far ahead and is surprised at Green Bottom Bar (8) and recaptured by gunboats "Key West" and "Tawah." The "Undine" is also attacked, but escapes back to land batteries.
- Nov. 3 - Confederates set up masked batteries at Reynoldsburg Island (9) and use "Undine" as decoy to get gunboats at Johnsonville to come within range, but Federals do not attack.
- Nov. 4 - At 8:00 A.M., six Federal gunboats, "Moose," "Brilliant," "Victory," "Paw Paw," "Fairy," and "Curlew" attack from north, but stop at (10). Also three gunboats from south join fight, but are turned back at (9) after forcing "Undine" to run aground. Confederates burn "Undine" and drive off boats from north. Meanwhile batteries are bidden at (11) and at 2:00 P.M. open fire on Johnsonville, destroying depot and sinking 3 gunboats, 8 steamers, and 10 barges.
- Nov. 5 - Confederates continue south.

Tennessee state line. That day the first successful blow of the campaign was struck with the capture of the steamboat *Mazeppa* and a barge stuffed with supplies. The following day two transports, the *Venus* and *Cheeseman*, and the gunboat *Undine* were captured.⁶

Forrest arrived on Oct. 31 and with typical energy and ingenuity organized a "Tennessee River navy."⁵ After repairing the damaged *Undine* and *Venus* as well as they could and practicing a bit on the river, the intrepid lubbers steamed south (upstream) toward Johnsonville. Not being as adept on deck as in the saddle, they allowed the *Venus* to get too far ahead of the *Undine*, and it

was recaptured by two Federal gunboats steaming northward. Two days later, Nov. 4, the *Undine* was also trapped, and though all on board escaped, the *Undine* was burned to prevent recapture. So ended Forrest's brief career as a naval combatant⁶ (Fig. 2).

The adventure greatly contributed to the imminent Confederate victory at Johnsonville, for while the Federals were being distracted by his "navy," Forrest had gotten his batteries below Johnsonville,⁵ and on the afternoon of Nov. 4 they opened fire on the docked Federal craft, quickly creating a conflagration that spread from boat to boat. Only later was it learned that Forrest's ef-

forts were aided by a panicked Federal commander, who ordered his fleet razed to prevent its capture.⁴ After the boats had been burned or sunk, the artillery turned to the warehouses, totally destroying them.

The victory for Forrest was stunning. He destroyed four gunboats, 14 steamboats, 17 barges, and stores of 75,000 to 120,000 tons; 150 Yankees were captured at a cost of two Confederates killed and nine wounded.⁵

In addition to his superb tactics and bravado, much of Forrest's success in the Battle of Johnsonville can be attributed to the mythical proportions he had come to assume in the minds of the Federals. Colonel Charles Thompson, the commander of Johnsonville, estimated Forrest had 13,000 men and 36 guns. Actually, his forces during this battle were never more than 3,000 men and 10 guns. Thompson had at least 2,000 men and 12 guns at Johnsonville and a gunboat fleet of at least 33 guns.⁴

Under the glare of the burning town, Forrest rode south that night of Nov. 4 to join Hood in north Alabama. Still, the mystery of his whereabouts and potential threat continued.⁵ The Federal commander anticipated invasion and frantically called for reinforcements. On Nov. 7, it was reliably reported that Forrest was in Illinois and was about to attack and terrorize Chicago. But Sherman in a report to Grant was coolly accurate in summarizing ". . . that devil Forrest was down about Johnsonville making havoc among the gunboats and transports."⁴

Discussion

Forrest's destruction of Johnsonville occurred not in 1862, as recorded on the Academy gavel, but in the twilight of the War Between the States, in 1864. The only major acts left to be performed were Sherman's "March to the Sea," the destruction of the Confederate Army of Tennessee at Franklin and Nashville, and the final entrapment and surrender of the Army of Virginia.

The Battle of Johnsonville is little known and would seem to have been only a nuisance to the powerful and well-supplied Federal forces. It has been suggested that Forrest's Johnsonville efforts were unsuccessful because he failed to cross the

Tennessee River (west to east). If he had, Sherman's march to the southeast would allegedly have been endangered because of the exposure of his supply line.⁷ However, closer examination suggests otherwise, as the assertion disregards the tremendous destruction wrought by Forrest, and the Federal's subsequent disuse of Johnsonville. The blow to Sherman's supply lines was significant and it once more dramatized the unreliability of those lines to the impatient and resourceful Federal general. On Nov. 15, 1864, Sherman ceased reliance on them, and deciding to live off the land, he began his destructive "March through Georgia." The Federals evacuated Johnsonville on Nov. 30.⁴

The artistic ability and generosity of the Sager family are responsible for the Academy's possessing the remarkable gavel. The source of the timber from the Federal gunboat, though, is unknown. It is said that prior to the creation of Kentucky Lake in 1944, the river was often low enough at Johnsonville to see the sunken hulls.⁵ It must have been exciting to scavenge these naval relics of an improbable battle at this unlikely inland site in rural West Tennessee.

The oak from which the gavel was made has been part of those most divergent of human conditions, war and peace. After being a part of a terrible weapon for killing and destroying, it became a small, handsome device to create order for a professional society dedicated to healing and education. It would be difficult to imagine a better example of hammering Isaiah's proverbial sword into a plowshare. The Nashville Academy of Medicine respects this peaceful concept and has now used and protected for over a half-century what might be considered its symbol, the Yankee Gunboat Gavel.

REFERENCES

1. Dr. William Litterer's development of deadly gas. *Vanderbilt Alumnus*, Jan, 1919, p 41.
2. Winterholler C: New life for historic lab. *Vanderbilt Alumnus*, Summer, 1978, p 38.
3. McFeeley WS: *Grant, A Biography*. New York, W W Norton & Co, Inc, 1981.
4. Williams EF, Humphreys HK (eds): *Gunboats and Cavalry*, as told to J P Pryor and Thomas Jordan by Nathan Bedford Forrest. Memphis, 1965.
5. Henry RS: *"First with the Most" Forrest*. Indianapolis, New York, Bobbs-Merrill Co, 1944.
6. Jordan T, Pryor JP: *The Campaigns of Lieut.-Gen. N.B. Forrest*. New Orleans, Memphis, New York, Blelock and Co, 1868.
7. Mooney JL (ed): *Dictionary of American Naval Fighting Ships*, vol VII. Washington, Department of the Navy, 1981.

Steatorrhea as the Presenting Manifestation of Adenocarcinoma of the Colon

SETHU V. MADHAVAN, M.D.

This is a case report of malignant duodenocolic fistula due to adenocarcinoma of the hepatic flexure presenting primarily with steatorrhea. We reviewed the English literature and found only 49 cases of malignant duodenocolic fistula as a result of colon cancer. Our case is unique in that the patient's primary manifestation was steatorrhea.

Report of a Case

This 55-year-old woman complained of profuse, bulky, greasy, foul-smelling bowel movements seven to ten times a day and even at night time, for five months, associated with crampy abdominal pain, nausea, and occasional vomiting. She had lost about 30 lb during this time. When seen by her private physician three months earlier for the same problem, she had a normal chemistry profile, and normal upper GI and barium enema studies. The only abnormality was a low hematocrit, for which she was given iron tablets and multivitamins.

Physical examination revealed a cachectic white woman weighing 85 lb. Vital signs, HEENT, neck, breast, heart and lung examination were all normal. The abdomen was slightly distended and tympanic, but she had normal bowel sounds, and there were no masses or hepatosplenomegaly. Pelvic and rectal examinations were normal. The stool was clay colored and guaiac negative.

Laboratory data revealed hemoglobin 11.2 gm/dl, hematocrit 33.3%, WBC 15,400/mm³ with normal differential. Indices suggested microcytic hypochromic anemia. Sedimentation rate was 25 mm/hr, and serum electrolytes were normal. BUN was 16 mg/dl, phosphorus, 2.4 mg/dl, cholesterol 50 mg/dl. Liver and thyroid function tests, EKG, and chest and abdominal x-rays were all normal. Seventy-two hour stool collection revealed 83.3 gm of fat. Serum α -carotene was 13 mg/dl (normal 100-200 mg/dl). B₁₂ and folate levels were within normal limits. Upper GI x-rays revealed a large duodenocolic fistula, but there was no evidence of peptic ulcers or tumors. Barium enema studies failed to demonstrate the fistula. Liver and spleen scan was normal. An upper endoscopy showed completely normal esophagus and

From the Department of Medicine, Mt. Sinai Services—City Hospital Center, Elmhurst, N.Y., and the Department of Gastroenterology, Vanderbilt University, Nashville. Dr. Madhavan is now in private practice.

Reprint requests to 43847 Heaton Ave., Lancaster, CA 93534 (Dr. Madhavan).

TABLE 1
REVIEW OF ENGLISH LITERATURE
MALIGNANT DUODENOCOLIC FISTULA DUE TO
COLON CANCER

Author	No. of Patients
Lefebvre and Gardner ^{4*}	39
Janes and Mills ⁹	1
Gallagher ¹⁰	1
Calvert and Medhurst ¹¹	2
Jones and Joergenson ¹²	1
Hariston and Morton ¹³	2
Mowat et al ¹⁴	1
Hirsch ¹⁵	1
Vieta et al ¹⁶	2
Hakami et al ⁸	1
Welch and Warshaw ⁵	5
Solammadevi (this case)	1
TOTAL	57

*Eight of Lefebvre's cases were from other than English literature.

stomach, and a large, widely patent fistula between the third part of the duodenum and the colon. Biopsy from the margin of the fistulous opening revealed adenocarcinoma. The patient was given intravenous hyperalimentation, but 18 days after admission she suddenly expired due to a massive pulmonary embolism. Autopsy revealed a proliferating infiltrating adenocarcinoma of the hepatic flexure, with infiltration of the capsule of right kidney and the third portion of duodenum, causing the large duodenocolic fistula.

Discussion

Malignant duodenocolic fistula was first reported by Mindline and Rosenheim¹ in 1935. After reviewing 1,400 cases of right-sided colon cancer, Calmenson and Black² found only two cases of duodenocolic fistula. Among all sites of colon cancer hepatic flexure cancer is uncommon, with an incidence of 2.94% among 1,497 colon cancers.³ In a review in 1959 of the world literature, Lefebvre and Gardner⁴ collected 39 cases of malignant duodenocolic fistula due to primary colonic cancers. Since then, there have been only scattered case reports (Table 1). Re-

TABLE 2
CLINICAL FEATURES OF MALIGNANT
DUODENOCOLIC FISTULA*

Finding	Incidence
Diarrhea	44
Weight Loss	43
Abdominal Pain	37
Vomiting	24
Undigested Food in Feces	11
Fecal Emesis and/or Eructation	10
Abdominal Mass	16
Anemia	28
Steatorrhea	1

*Modified from Lefebvre and Gardner.⁴

cently, Welch and Warshaw⁵ reported five cases of malignant duodenocolic fistula from colon cancer out of their 30 years' experience. Duodenocolic fistula can be caused by both benign and malignant conditions. Benign causes include duodenal ulcer, gastric surgery, Crohn's disease, transmural colitis, pancreatitis, pancreatic pseudocyst, foreign body, tuberculous lymphadenitis, and typhoid ulceration.⁶ Rarely it can be idiopathic or due to embryological defect.⁷ Malignant causes include adenocarcinoma of the colon, duodenum, pancreas, or gallbladder.

As opposed to the usual manifestation of colonic tumor, patients with duodenocolic fistula due to colon cancer can primarily present with symptoms of malnutrition and metabolic derangement, its severity depending upon the location and size of the fistula. Patients can also present with diarrhea as a major symptom, related either to the fistula from the proximal to the distal bowel or to the bacterial overgrowth of the proximal intestinal tract as a result of the fistula. In the presence of a distal obstructing lesion, diarrhea can be masked. Symptoms and their frequency

are given in Table 2. Steatorrhea as a primary presenting symptom is extremely rare, and to our knowledge there is only one other case in the English literature, reported in 1935.

Barium studies may or may not reveal the fistula depending on the size of the fistulous opening. Endoscopy is a great technical advance which will enable us to visualize the mucosal abnormality and can also confirm the histology. Formation of such fistulae in a malignant disease does not contraindicate a radical operative procedure, and in fact, an aggressive radical approach in such patients has yielded a good survival rate,⁸⁻¹⁰ though the metabolic abnormalities and nutritional status have to be improved with meticulous care before surgery.

REFERENCES

1. Mindline J, Rosenheim ML: Duodenocolic fistula simulating idiopathic steatorrhea. *Lancet*, Oct, 1935, pp 764-767.
2. Calmenson M, Black BM: Surgical management of carcinoma of the right portion of the colon with secondary involvement of the duodenum, including duodenocolic fistula: Data on eight cases. *Surgery* 21:476-484, 1947.
3. Boehme EJ, Hanson PJ: Carcinoma of the colon and rectum: Site of growth of 1,497 lesions. *Surg Clin North Am* 26:551-552, 1946.
4. Lefebvre BM, Gardner CM: Malignant duodenocolic fistula. *Can J Surg* 3:86-90, 1959.
5. Welch JP, Warshaw AL: Malignant duodenocolic fistulas. *Am J Surg* 133:658-661, 1977.
6. Ahmad W, Atik M: Duodenal ulcer as a cause of duodenocolic fistula: A case report and review of literature. *Am Surg* 39:281-285, 1973.
7. Torrance B, Jones C: Three cases of spontaneous duodenocolic fistula. *Gut* 13:627-630, 1972.
8. Hakami M, Dadgostar D, Feshareki R: Invasive carcinoma of the colon and duodenum with duodenocolic fistula: Report of case. *Am J Proctol* 27:(4) 35-36, 1976.
9. Janes RM, Mills JR: Malignant duodenocolic fistula—Report of a case treated successfully by mass resection. *Can J Surg* 3:91-93, 1959.
10. Gallagher HW: Extended right hemicolectomy: The treatment of advanced carcinoma of the hepatic flexure and malignant duodenocolic fistula. *Br J Surg* 47:616-621, 1960.
11. Calvert DG, Medhurst GA: Fistula formation between the duodenum and colon: A report of three cases and a review of condition. *Br J Surg* 48:136, 1960.
12. Jones SA, Joergenson EJ: Closure of duodenal wall defects. *Surgery* 53:438, 1963.
13. Hariston P, Morton CB II: Internal fistula formation secondary to colon malignancy. *Va Med Month* 92:76-80, 1965.
14. Mowat W, Davidson JK, James WB: Duodenocolic fistula. *Scott Med J* 11:164-167, 1966.
15. Hirsch K: Duodenocolic fistulae due to carcinoma of transverse colon. *Va Med Month* 102:729-731 1975.
16. Vieta J, Blanco R, Valentini GR: Malignant duodenocolic fistula: Report of two cases, each with one or more other synchronous gastrointestinal cancers. *Dis Colon Rectum* 19:542-552, 1976.

A recent article in the *New England Journal of Medicine* pointed out that approximately 53% of the hospital care dollar was used by 13% of the patients, and there was a very high association of these high-cost patients with obesity, diabetes, heart disease (gluttony), lung disease (smoking) and cirrhosis of the liver (overdrinking). In effect, since 10% of Americans will be admitted to a hospital per year, 1.3% of Americans accounted for 53% of the hospital care dollar. This only accounts for the chronic effects of these habits and says nothing about car accidents, etc., related to drinking and drugs.

Charles Wolfe, M.D.
Letters to the Editor
Wall Street Journal (12/21/81)

Prolonged Postoperative Succinylcholine-Induced Apnea With Pseudocholinesterase Deficiency

SUNG J. CHUNG, Ph.D., M.D., and DOUGLAS ANDREWS, M.D.

Succinylcholine is used in many anesthetic procedures as a muscle relaxant of short duration, lasting two to four minutes.^{1,2} Its short duration of action is the result of rapid hydrolysis by pseudocholinesterase (plasma cholinesterase). It has been known that in a small group of the population a genetically determined deficiency of pseudocholinesterase leads to prolonged postoperative succinylcholine-induced apnea.³ This article describes a case of prolonged succinylcholine-induced apnea with pseudocholinesterase deficiency.

Case Report

A 40-year-old white woman, gravida 4, para 4, was admitted to the hospital for tubal ligation because of multiparity. The physical examination, past history and family history were unremarkable. Routine laboratory studies on admission revealed normal complete blood counts, urinalysis, and SMA-12 series.

Premedication consisted of 50 mg of meperidine and 0.5 mg of atropine IM, 1½ hours before induction of anesthesia. Under general anesthesia the patient underwent without incident a laparoscopic bilateral tubal ligation with the application of KLT Falope rings. Induction of anesthesia with 200 mg of thiopental and intubation with 100 mg of succinylcholine as a muscle relaxant were uneventful. A 2-mg dose of metocrine iodide was given as pretreatment prior to administration of succinylcholine for intubation. Maintenance of anesthesia was provided by nitrous oxide (3 liters/min)-oxygen (2 liters/min)-Enflurane. The operation was carried out from 10:08 AM to 10:21 AM. At the end of the operative procedure the patient did not resume spontaneous respirations, but the vital signs were otherwise stable. This apnea was believed to be succinylcholine induced.

The patient was transferred to the recovery room, reintubated, and placed on Bennett MA1 respirator at 600 cc tidal volume and at a rate of 16 breaths per minute. A diagnosis of phase II block versus low pseudocholinesterase was entertained. This was later on confirmed by finding in the

blood sample drawn in the recovery room a pseudocholinesterase level of 538 mU/mg at 25°C (normal range: 1,875 to 3,125 mU/ml at 25°C), or 15% to 25% of normal range. This test was performed by the East Tennessee Baptist Hospital Laboratory at Knoxville, Tenn., using a colorimetric assay (Boehring Mannheim Corp.).

No muscular twitch response was obtainable by electrical stimulation of the radial nerve with the Blockaid Monitor until 1:00 PM, when a weak twitch response occurred, and the first spontaneous respiratory efforts were observed. The spontaneous tidal volume was 200 cc and the patient was able to move her extremities. The twitch response was 3+ at 2:00 PM, when the spontaneous tidal volume was 600 cc, and at 2:25 PM the endotracheal tube and the airway were removed. The patient had been on the respirator for four hours. At 2:30 PM the patient was able to breathe on her own and brought up a large amount of mucus. She was transferred to the intensive care unit at 3:45 PM when she was alert and responsive. Her vital signs were blood pressure 100/70 mm Hg, pulse 80/min, respiration 20/min. She was monitored and responded well. She went on to complete recovery, and was discharged the next morning.

Subsequent pseudocholinesterase studies carried out on the patient's four daughters, ages 10 to 16, revealed a child with a low level, one with a borderline low level, and the other two with normal levels (Table 1).

They were advised to notify the medical staff of our findings on any admission to the hospital in the future. The patient's husband was not studied. The patient appeared homozygous for atypical cholinesterase and the daughters seemed to be either heterozygotes or normal. The husband appeared to be a normal homozygote. Studies for the dibucaine number and fluoride number were not done in our cases.

TABLE 1
PSEUDOCHOLINESTERASE LEVELS IN PATIENT'S FAMILY

Subject	Age	Pseudocholinesterase (mU/ml)
Patient	40	538
Daughter	16	1,733
Daughter	15	1,496
Daughter	13	1,907
Daughter	10	2,445
Normal Range		1,875-3,135

From the Departments of Pathology and Anesthesiology, Morristown-Hamblen Hospital, Morristown, Tenn.

Reprint requests to Department of Pathology, Morristown-Hamblen Hospital, Morristown, TN 37814 (Dr. Chung).

Discussion

Pseudocholinesterase is a glycoprotein almost exclusively produced by the liver and capable of hydrolyzing succinylcholine, a depolarizing muscle relaxant.⁴ The physiologic function of this enzyme is completely unknown. Persons totally devoid of this enzyme are perfectly normal except for prolonged paralysis after injection of succinylcholine. Genetic studies have shown that 1 in 2,800 individuals in most populations has idiopathic pseudocholinesterase deficiency and is homozygous for an autosomal recessive gene.⁵ In addition to the above-described, genetically determined pseudocholinesterase deficiency, low pseudocholinesterase has been reported in patients with liver disease, malnutrition, severe anemia, and previous exposure to anticholinesterase agents such as organophosphorus pesticides.

The succinylcholine-induced apnea is a reversible and treatable disorder. Since there is no pharmacologic antidote for succinylcholine-induced paralysis, a controlled respirator is used as a safe therapeutic measure for this disorder until the effect of succinylcholine wears off. A more rapid reversal of the apnea may be achieved by

administration of pseudocholinesterase. Prolonged succinylcholine apnea was successfully terminated by infusion of a commercial human serum cholinesterase (Behringwerke) available in Europe but not in the United States.^{6,7} Epstein et al² reported that 87% of the initial pseudocholinesterase activity was retained in banked blood after 21 days of storage at 4°C and 100% of its activity in fresh-frozen plasma for seven weeks at -70°C. He suggested that transfusion of blood and fresh-frozen plasma prior to or during succinylcholine administration might be effective in the management of prolonged apnea resulting from pseudocholinesterase deficiency.

REFERENCES

1. Zoerb DI: Atypical pseudocholinesterase activity: A review and presentation of two cases. *Can Anaesth Soc J* 15:163-171, 1968.
2. Epstein HM, Jarzemy D, Zuckerman L, et al: Plasma cholinesterase activity in bank blood. *Anesth Analg* 59:211-214, 1980.
3. Theodore J, Miller JE, Murdaugh V, et al: Prolonged postoperative apnea with pseudocholinesterase deficiency. *Am Rev Respir Dis* 96:508-511, 1967.
4. Feldman SA: *Muscle Relaxants*, ed 2 (vol. 1 in the series of Major Problems in Anesthesia). Philadelphia, WB Saunders Co, 1979, pp 170-172.
5. Kimbrough RD, Suggs JE: Succinylcholine and pseudocholinesterase. *JAMA* 225:1532, 1973.
6. Stovner J, Stadsklien K: Suxamethonium apnea terminated with commercial serum cholinesterase. *Acta Anesthesiol Scand* 20:211-215, 1976.
7. Scholler KL, Goedde HW, Benkmann HG: The use of serum cholinesterase in succinylcholine apnea. *Can Anaesth Soc J* 24:396-400, 1977.

LIFE EXPECTANCY REDUCTIONS

Activity or Risk Factors	Days of Life Expectancy Reductions
Heart Disease	2,100
Being Unmarried	2,000
Cigarette Smoking	1,600
Cancer	980
Vietnam Army Duty	400
Motor Vehicle Accidents	200
Homicide	90
Poison, Suffocation, Asphyxiation	37
Diet Drinks	2
Hurricanes, Tornadoes	1
Airline Crashes	1
Harrisburg Area Residents (from Three Mile Island accident)	.002
Radioactive Waste Burialground Leaks Risk to Nearest Neighbors	.0001

The Two Faces of Opportunity

JOHN H. BURKHART, M.D.

Editor's Note

Dr. Burkhart is a past president of the Tennessee Medical Association, and presently serves as chairman of the Judicial Council of the American Medical Association. As long-time secretary of Tennessee's Board of Medical Examiners, he has signed the medical license of each of his three sons, one of whom he was addressing as a member of this year's graduating class in medicine from the University of Tennessee Center for the Health Sciences, Memphis, June 12, 1982.

I am well aware of the heterogeneity of the graduates who sit before me today, as more than one discipline is represented. But each of you is part of a team endeavor, dedicated to the care and preservation of the health and welfare of all of our people. Therefore, to charge you all I must speak not just to my young physician colleagues, but to each of you who will leave here today to do so many different things. Some of you will begin immediately to put your present training to work, others will enter into programs of further training; but all, I hope, will begin a rewarding journey down the open road to service, adventure and opportunity.

That is what I want to talk to you about this afternoon. At this particular and special time in your life and career, it may be appropriate to consider for a moment what *is* your concept, what *are* your expectations of the opportunities ahead of you, and what will be your response to these opportunities when you do meet them.

There are at least two conflicting philosophies of how our opportunities are extended to us, and I think that in a world such as ours is today, with all its rapidly changing prevailing moral, ethical and legal standards and values, and with a dominant thread of frustration and cynicism weaving

its way through our every-day awareness of the events surrounding us, it behooves you at this precise moment to ponder the contrasting ideas expressed in two short poems which I ask you to listen to now, and to consider which of these two concepts of opportunity you will embrace.

The first poem is well known, and is crystal clear in its message: opportunity knocks but once.

Master of human destinies am I.
Fame, love, and fortune on my footsteps wait;
Cities and fields I walk; I penetrate
Deserts and seas remote, and, passing by
Hovel, and mart, and palace, soon or late
I knock unbidden once at every gate!
If sleeping, wake—if feasting, rise before
I turn away. It is the hour of fate.
And they who follow me reach every state
Mortals desire, and conquer every foe
Save death; but those who doubt or hesitate,
Condemned to failure, penury and woe.
Seek me in vain and uselessly implore—
I answer not, and I return no more.

Do you believe that? Is life a merry-go-round with only one chance at the brass ring? Is it all or nothing? Do you have only one fleeting moment of decision and, based on that decision, is all either won or all lost? Is that what you believe? Dear friends, I hope not! I present this thought to you only in order to reject it. Don't believe it. It is not so. Listen to the other aspect, the other face of opportunity.

They do me wrong who say I come no more
When once I knock and fail to find you in,
For every day I stand outside your door
And bid you wake, and rise to fight and win.
Wail not for precious chances passed away,
Weep not for golden ages on the wane!
Each night I burn the records of the day;
At sunrise every soul is born again.
Dost thou behold thy lost youth all aghast?
Dost reel from righteous retribution's blow?
Then turn from blotted archives of the past
And find the future's pages white as snow.
Art thou a mourner? Rouse thee from thy spell;
Art thou a sinner? Sins may be forgiven;
Each morning gives thee wings to flee from hell,
Each night a star to guide thy feet to Heaven.

Reprint requests to 939 Emerald Ave., N.E., Suite 907, Knoxville, TN 37917 (Dr. Burkhart).

Now here is something you can live by, something you can hang your hat on. Here is a philosophy that won't let you down. Here is salvation for the sinner, hope for the bumbler, a stimulus for the procrastinator, confidence for the waiverer, another chance for the chronic loser. Opportunity comes again and again, and a missed encounter is not necessarily fatal.

I challenge you to seek and to find the opportunities for being what you have prepared and have been prepared to be: a healer; a confidant, a friend, a servant, a perpetual student, and a holder in your hand of life and death, called by God to do His work on Earth.

My thesis is that these opportunities will be present along the road you will travel from here today, but I also must warn you that there are along this road at least four very important fundamental guideposts which must be read and followed if you would take advantage of the opportunities you will meet. My final effort to prepare you is to list them for you.

The first of these guideposts reads BE CURIOUS. You have learned much up to this point, but that is no reason for not wanting or not needing to know more. If anything, the knowledge that you now have should make you more curious about the things you do not know. There is still so much that is not known by anyone; there are still so many frontiers, so many problems to be solved, ranging from scientific to sociological. You surely know how tremendously and how rapidly all of the health sciences have advanced and are advancing. If you learn no more than you know now, your ability and your value in your chosen profession will be at rock bottom in ten years, maybe in five. Be curious! Find out all you can and keep on looking and learning.

The second guidepost along the road of opportunities says BE CONSIDERATE. Courtesy has become almost a lost art in our society. If chivalry is not dead it is certainly quite ill. The Good Samaritan, you remember, didn't have to stop when he saw the man the robbers had left bleeding on the road. In fact, it was rather expected that he would not stop, but he did. Being considerate means going beyond the requirements; it means more than just getting by. We must all learn to be more sensitive to the feelings of others. This is a serious matter, for it is an attitude not too popular in a world where the drift of things is in the other direction. A warm, big-hearted consideration has a worth that simply


cannot be measured. It might well have been the 11th commandment. Thou shalt be considerate.

The third guidepost says BE CONCERNED. That translates into other attributes such as being compassionate and being conscientious. Its key word is *care*. If you care, you will give of yourself to support those values worthy of your patronage, your influence, your time, your money. You will take part in community and civic affairs, your church, your college and postgraduate school alumni associations, and the organized societies that represent your profession. And above all, if you care, you will be honest, you will be ethical, you will be moral, you will be an asset to your profession—a credit, and not a liability. Remember, your colleagues, your teachers, your family, your friends, your patients, your school, and those whom you serve, deserve the best you can give. You *must* be concerned. You must *care*.

The last of these four guideposts pleads BE CONSTRUCTIVE. That is one of the hardest things to practice in day-by-day living. One habit that mars our chances of being constructive is the habit of complaining. Being dissatisfied is an excellent qualification for building a better world, but you must remember that dissatisfaction is a soil that grows the world's cynics as well as its servants. Dissatisfaction that seeks and finds the answer produces the public servant, the builder of a new day, the discoverer of a better way. Dissatisfaction that has no answers produces the critic, the complainer, and the carper against humanity and life in general. Being constructive calls for a great deal of patience. It calls for following through from dream to deed, the only way to keep our dreams from evaporating into nothing.

I don't believe in the doleful, glum face of missed opportunity. I believe in the other face, the bright, cheerful face that says to you and to me, "If at first you don't succeed, try, try again. I'll be back; catch me the next time around. But don't take me lightly, don't take me for granted. Don't miss me if you can help it." Look for the guideposts, and you will find your opportunities.

You are the cream of the crop of the youth of today. You are the envy of many. From you the world expects much. By your efforts it expects to survive. You must not disappoint it.

From this day on you are commissioned. You have a duty! I challenge you, I charge you: Go forth from here today, as servants, seeking the opportunities to serve. "He that would be greatest among you, let him be servant of all." 

These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

health
issues
of the
80's

health care coalitions

In a period when the economy in general is creating growing national concerns, the rising costs of medical care are a focus of attention for the medical profession and for many other groups — business, insurers, hospitals, labor, consumers, and government. Our country is reviewing and reassessing private and public policies on costs, planning, and delivery of health care.

It is a time when all must share in the responsibility for finding solutions. And these solutions must be developed locally to deal with unique local problems. A relatively new type of group — the health care coalition — is coming to the fore as a promising voluntary organization to deal with health care problems on a local, regional, or state basis.

At the national level, the AMA has joined with the American Hospital Association, the Blue Cross and Blue Shield Associations, the Business Roundtable, the Health Insurance Association of America, and the American Federation of Labor and Congress of Industrial Organizations (AFL-CIO) to endorse the concept of voluntary coalitions. Members of the national groups have agreed also to encourage members and local affiliates to participate together in such coalitions.

For the AMA, supporting the development of health care coalitions is a natural extension of its activities over the past three years in developing contacts at the national level with business and industry groups. The AMA has also encouraged state and local medical groups to establish dialogues with businesses and industries in their areas to discuss common concerns about health care delivery.

Within the federation of medicine, both state associations and county societies have pursued the initiation of medicine-business coalitions. About 46 medicine-business coalitions are in operation or in development stages. Others are being discussed. In many states where state associations have not established coalitions, they have initiated meetings with business, and frequently they have included other providers. Most state medical associations see their roles as catalysts for county-level coalitions, and many have sponsored programs and prepared technical assistance materials for county groups.

The AMA believes that these coalitions have the promise of being **the most effective mechanisms** for containing health care costs. Even though a local coalition of providers, insurers, business, and labor may not necessarily develop new cost-effectiveness ideas, it can create a better base of support for implementation of effective programs. For example, the medical community has long supported such policies as the elimination of nonemergency, weekend hospital admissions; increased preadmission testing; and greater use of outpatient services, such as ambulatory surgical centers, when medically appropriate. Endorsement of these policies and cooperative action by employers who furnish health insurance and by labor unions who bargain for benefits can make implementation of these policies a reality.

The AMA believes it is imperative that health care coalitions have physician participation so that primary emphasis is given to **quality** and **availability** of medical care and **access** to it, as well as to cost effectiveness and cost containment.

To help medical societies form coalitions or participate effectively in existing ones, the AMA has resource materials and other aid available. We in organized medicine must participate. **Now** is the time for medical societies to enlarge their leadership role and show the way.

Such leadership requires your support. The larger our membership (now 232,000) the greater our influence, and our strength as the only representative for all of medicine.

For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196.



Management of Hyperlipidemia in Coronary Artery Disease

CHARLES E. KOSSMANN, M.D., Editor

STEPHEN V. ORMAN, M.D.
(Resident Physician)

A 47-year-old white male truck driver who began to have bouts of angina on effort in 1979 was admitted to the hospital in January of 1981 for a prolonged attack. An electrocardiogram displayed the Q waves of an inferior scar and new abnormalities of the ST segment and T wave in left lateral leads suggestive of ischemia. The MB fraction of the serum creatine phosphokinase was elevated. After a program of rehabilitation, during which he was taking 10 mg of isosorbide dinitrate four times a day, he was discharged.

When he was readmitted in April of 1981 for elective cardiac catheterization, coronary arteriography, and consideration of coronary artery bypass, he complained only of occasional angina with some shortness of breath on climbing one flight of stairs. Glucose intolerance had been discovered in March of 1980, when his serum cholesterol was 401 mg/dl, with triglycerides of 809 mg/dl. He was started on a diabetic diet and 20 units of NPH insulin subcutaneously daily, a program of weight reduction, and an exercise routine. For moderate hypertension, sodium restriction was instituted. Other past history included one episode of renal colic 12 years earlier and a bout of vertebral basilar artery insufficiency due to cervical spondylosis corrected by excision of a cervical disc. He had smoked three packs of cigarettes per day for 35 years, and had consumed a quart of whiskey per day for many years until he abstained in 1974.

The patient was 5 ft 6 in tall and weighed 170 lb. Temperature was 99°F, and blood pressure 140/100 mm Hg. There was a cataract on the left but no lipemia retinalis. The heart showed an apical S₄ and the lungs contained diffuse ronchi. There was a liver span of 12 cm. There were no xanthomas or xanthelasma.

The electrocardiogram had been stable since discharge in January, with persistent evidence of an inferior scar and a return to normal of the previously noted abnormalities of the final ventricular deflections. A roentgenogram of the chest showed a normal sized heart. The serum cholesterol was 522 mg/dl, the triglycerides 5,399 mg/dl. Thyroid function was normal. The serum albumin was normal, as was a urinalysis. The echocardiogram displayed left ventricular hypertrophy with posterior hypokinesis. An exercise treadmill test was attempted but terminated at two minutes because of cramping

in the calves. On ergometer testing, chest pain occurred at four minutes without electrocardiographic changes. Cardiac catheterization with coronary arteriography displayed two-vessel disease with a high grade lesion of the right coronary and circumflex arteries with poor distal runoff. There was posterior hypokinesis on the ventriculogram.

He was treated with an 800-calorie diabetic diet and insulin was adjusted for control of the diabetes, on which the serum triglycerides came down to 3,803 mg/dl but the cholesterol increased to 626 mg/dl. When clofibrate, 2 gm/day, was added the serum triglycerides decreased to 411 mg/dl.

Since the angina was not incapacitating it was decided at discharge to proceed with medical rather than surgical therapy. An ADA diet of 1,500 calories with 2 gm of sodium required coverage with 25 units of NPH insulin and 15 units of regular insulin. Other medications included isosorbide dinitrate 20 mg four times a day, and daily doses of digoxin 0.25 mg, furosemide 40 mg with supplemental potassium, and, as noted, clofibrate 2 gm.

The final diagnoses were (1) hyperlipidemia, type IV-V; (2) diabetes mellitus, type II; (3) essential hypertension; (4) cardiac (a) atherosclerosis and hypertension; (b) enlarged heart (left ventricle), coronary sclerosis with stenosis of the right coronary and circumflex arteries, inferior wall infarction; (c) NSR, anginal syndrome; (d) class IIC; (5) atherosclerosis obliterans, lower extremities.

On a follow-up examination three months after discharge the patient continued to have stable angina. He had been relatively noncompliant regarding diet and had gained 8 lb. The serum levels of cholesterol and of triglycerides remained as they had been in the hospital.

STEWART L. NUNN, M.D.
(Professor of Medicine, Cardiology)

There are many aspects of the relationship of lipids to coronary disease that could be discussed. My aim is to present the lipid abnormalities that you may encounter clinically so that when I get through you will have some idea of a rational approach to those problems. I think it will allow you to control about 95% of them. Hyperlipidemias don't ordinarily require extensive laboratory studies or anything exotic such as ultra-

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.
Presented Nov. 4, 1981.

centrifugation or even determination of serum electrophoretic patterns. There are a few that are unusual or mixed, which require detailed work-up, but they are very few.

I have noted that most of our patients with lipid disorders are either not treated, or if they are the treatment is not very effective. I hope to be able to tell you some things that should remedy that situation. After I have gone through an outline of lipid disorders, I want to end by considering this case specifically and give what I think is an appropriate course of action for him.

The process of atherosclerosis is a slow one, usually progressing over decades before and after becoming symptomatic. Part of the reason for considering lipid disorders is that there is evidence now that progression of these lesions can be slowed or even reversed. In fact, it was in a stenotic renal artery that one of the first clear examples of regression of atherosclerosis was reported about five years ago.¹ The patient had stenosis of a renal artery with renovascular hypertension, a type IIB lipid disorder, and a superb response of the lipids to therapy; the lesion in the renal artery just melted away.

It has also been shown that atherosclerotic lesions can be kept stationary over a period of ten years or so. It really doesn't matter where in the world it is tested; as plasma cholesterol levels are higher, the likelihood of coronary disease and other atherosclerotic diseases increases. Whether the study is done in Minneapolis or Framingham or Oslo, the relationship is the same. There are some i's to dot and t's to cross, but the words "cholesterol controversy" do not reflect the reality of the solid relationship of plasma cholesterol levels to the development of atherosclerosis.

In young adults with coronary disease, as demonstrated by coronary arteriography, the incidence of hyperlipidemia is high—in as many as two thirds of those in their 30s. After age 50, the incidence of hyperlipidemia as a major causative factor for atherosclerosis begins to be less prominent. Part of the reason is that many of the patients who had severe hyperlipidemia are dead by then.

Classification of Lipoproteins

Since lipids are insoluble in aqueous solutions, for transportation in the plasma from sites of absorption or generation to sites of utilization they must be made, for the most part, into soluble forms of macromolecules known as lipoproteins.

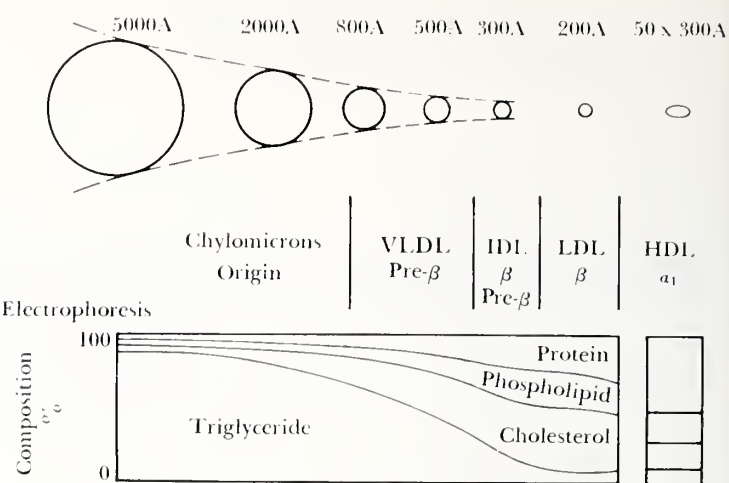


Figure 1. The five categories of serum lipoproteins based on size (circles) and chemical composition (graph). VLDL, very low-density lipoprotein; IDL, intermediate-density lipoprotein; LDL, low-density lipoprotein; HDL, high-density lipoprotein. The corresponding electrophoretic designations (middle), with chylomicrons at the origin of the electrophoretic cell, are pre-β, β and α. Note that the electrophoretic migration is not in the order shown, the β band preceding the pre-β band in migration from the origin (see Fig. 2).

Their *size* and *density* depend in part on the relative amounts of protein, cholesterol, phospholipids, and triglycerides in each (Fig. 1). Density can be determined by *ultracentrifugation* and correlated with *electrophoretic behavior* of the compounds. Chylomicrons float to the top of the ultracentrifuge tube; they contain mostly triglycerides and very little else. High-density lipoproteins (HDL), the α-lipoproteins, sink to the bottom of the tube. They are of recent increased interest because they appear to be associated not with atherosclerosis but with freedom from it. Note in Figure 1 that they are mostly protein; they contain only a little fat in the form of triglycerides, cholesterol, and phospholipids. Very low-density lipoprotein (VLDL) also floats to the top during ultracentrifugation and constitutes the pre-β fraction on electrophoresis. It contains a large amount of triglyceride and some cholesterol. The one most clearly associated with atherosclerosis is low-density lipoprotein (LDL). On the electrophoresis it produces the β band, which occurs between the chylomicron and pre-β bands (Fig. 2). It contains mostly cholesterol but some other lipids as well.

In addition to electrophoresis and ultracentrifugation a third way to classify the lipoproteins is by the *size* of these macromolecules. The largest particles are chylomicrons, about 5,000 Å in diameter. Those not quite as big are the VLDL, which can be large or medium in size. Then comes the LDL, which are small particles, and finally the extremely small particles of HDL. Interrelating these compounds in terms of their size, lipid

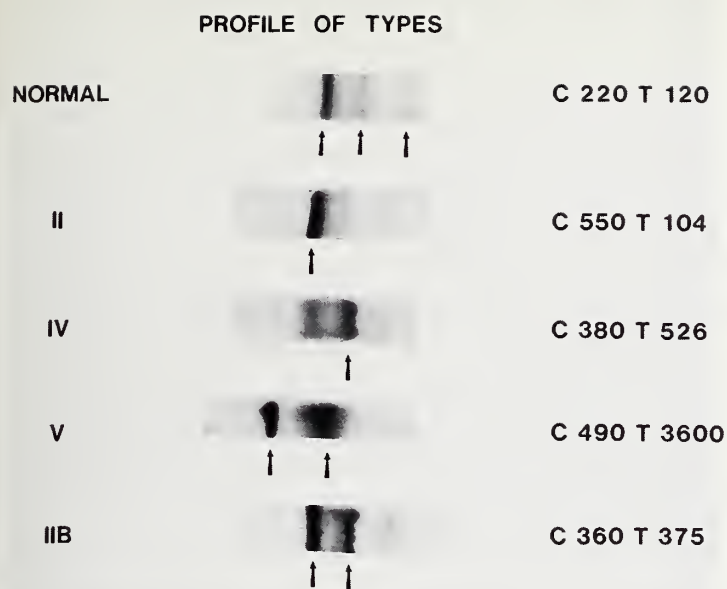


Figure 2. Electrophoretic profiles and usual serum contents of cholesterol (C) and triglycerides (T) in normal subjects and in hyperlipoproteinemia of types II (IIA), IV, V, and IIB. The arrows indicate from left to right the electrophoretic bands as follows: chylomicrons β , pre- β and α . In type V the second arrow is on the fused β and pre- β bands (called broad β) to indicate a considerable increase of both LDL and VLDL or IDL (intermediate density lipoprotein).

content, electrophoretic migration, and behavior in the ultracentrifuge helps to understand the biochemical background of the clinical hyperlipidemias.

Clinical Classification of Hyperlipidemias

In disorders of lipid metabolism, the physical behavior of the lipoproteins in the laboratory makes possible a classification of patients in the clinic.

If you spin down a tube of normal diluted serum (Fig. 3) it will yield a little HDL at the bottom, a little LDL about midway and VLDL at the top. In the patient with Frederickson's type IIA hyperlipidemia,² there is an excess of LDL, which settles in the upper middle of the ultracentrifuge tube. In type IV, the excessive amount of VLDL floats to the top. In type IIB there are increased LDL and VLDL fractions in the ultracentrifuge study; a β and pre- β band are seen on electrophoresis (Fig. 2).

Common electrophoretic patterns are seen in Figure 2. Electrophoresis amounts to "an electrochemical racetrack" in which lipoproteins exposed to an electric field migrate toward the negative side of the field (to the right in Figure 2) at unequal rates of speed. Serum of type IIA abnormality (labeled "II" in Figure 2) yields a heavy β (VLDL) band. With type IV or V, as in our patient today, there are too many triglycerides



Figure 3. Distribution of the serum lipoproteins on ultracentrifugation in a normal subject and in type IIA, type IV, and type IIB hyperlipoproteinemias. The dark bands at different levels are the lipoproteins characteristic of each type (see text).

yielding a heavy pre- β (VLDL) band. Type V is usually a type IV mechanism that has gotten so bad that much of the triglyceride has spilled over into the chylomicron band. Type IIB consists of prominent β and pre- β bands; this pattern is surprisingly common in our lipid patients, comprising about 25%. Notice the lipid levels in type IIA; the cholesterol is high and the triglycerides are normal. In type IV the cholesterol is elevated a little but the triglyceride is the lipid that is mainly elevated. In type V the triglycerides may be at extremely high levels; the cholesterol usually goes up a little because, as you will recall, there is some cholesterol in the pre- β fraction. In type IIB there is about a 1 to 1 ratio of cholesterol and triglyceride. These facts are important because they will let you dispense with an electrophoretic or ultracentrifugal study in the usual case. Instead, you can take the lipid levels and work

backwards to make an inference as to what type is present.

Mechanisms of Hyperlipidemia

In the past 10 years some really important discoveries have occurred relative to the causes of lipid abnormalities. In familial type IIA lipid disorder (cholesterol high, triglyceride normal) there are defects in the LDL cell wall receptors. The receptor sites may be abnormal, diminished, or absent. Therefore, LDL does not get into the cell. The cell apparently reacts to the lack of LDL by manufacturing a great excess of it in an effort to compensate for what appears to be inadequate plasma LDL. The result is excess plasma LDL, the most intensely atherogenic of all the lipoproteins. The work on receptors, done by Brown and Goldstein,³ is an intriguing cellular explanation of a clinical syndrome and it has suggested several therapeutic possibilities.

In type IV disorders there are also important recognizable metabolic features. The hypertriglyceridemia of type IV abnormality may reflect not only excessive production but also decreased rate of clearing of serum triglycerides by lipoprotein lipase. Anything that increases insulin levels, such as type II diabetes with insulin insensitivity, obesity, or steroid administration, may lead to increased production of triglycerides. Further, insulin insensitivity, common in type II diabetes, also leads to a decrease in lipoprotein lipase activity causing a decreased removal of triglyceride. The result may be a flood of triglycerides, in some instances reaching 50 times the normal level, an extraordinary and dramatic metabolic event. When triglyceride levels are above 1,000 mg/dl, chylomicrons appear in the plasma along with a great excess of VLDL, creating a type V pattern. Red cells don't release oxygen in a normal fashion, blood viscosity is increased, and some bizarre syndromes can be encountered, not just lipemia retinalis but other manifestations as diverse as eruptive xanthoma or pancreatitis. In addition, hypertriglyceridemia in young men has been associated with atherosclerosis, although the relationship is not clear.

High-Density Lipoprotein (HDL)

Now let us consider HDL, the α -lipoprotein. The average human male has 45 mg/dl, the average female 55 mg/dl in the serum. Increased α -lipoproteinemia has been shown by a number of studies, though not all, to be associated with a reduction in the likelihood of atherosclerosis.

Among factors that raise HDL are estrogens, alcohol (less than 2 oz per day), heavy exercise, weight reduction, prudent diet, nicotinic acid and clofibrate. Alcohol cannot be recommended since some 15% of patients will have an increase in VLDL with its use. The response to exercise is dose related; running 15 miles per week can raise HDL levels by 10 to 20 mg/dl. Drugs cannot be recommended at this time to raise HDL levels.

To things that lower HDL—progesterone, testosterone, insulin excess, obesity, diabetes mellitus—cigarette smoking must be added. It is astounding that in addition to all the other adverse effects of cigarette smoking, it also adversely affects serum HDL.

The overall conclusion is that those things that have been thought of as appropriate to prevent or limit atherosclerosis have worked out quite well from the standpoint of HDL response.

Therapy in Relation to Type

There are two ways of looking at plasma lipids in relation to atherosclerosis. One of them has to do with people who have so-called normal lipid levels in the United States, a serum cholesterol below 220 mg/dl or a triglyceride level below 150 mg/dl. We know that atherosclerosis starts to rise in incidence with serum cholesterol at about 220 mg/dl, but the lower the level the greater the likelihood of escaping atherosclerosis. In populations where serum cholesterol runs 150 to 160 mg/dl, the incidence of atherosclerosis is very low. The "prudent diet" will allow a patient to have as low a cholesterol level as he can conveniently have in the United States. I think we have made a mistake in describing that diet in medical rather than esthetic terms. It can be a superior diet; a large part of the world lives on it by choice. An example of a good approach is Craig Claiborne's "Gourmet Diet Cookbook"⁴ in which he took the medical bare bones of the prudent diet and developed a really superb cuisine.

For patients with overt lipid elevations other factors must be considered. A lipid analysis of 90 patients referred to the lipid clinic at the Memphis VA Medical Center showed type IIA patients made up 19%; type IV were 49% of the group; type IIB were 23%; and 9% had type V disorder, as did our patient today.

Abnormalities other than atherosclerosis associated with type IIA disorder in the familial form include rings around the cornea, xanthelasma, tendon lesions, and a high serum cholesterol since before birth. These patients get cholesterol de-

posits in organs other than the arteries, and they may be quite resistant to treatment.

When the cholesterol is high and the triglycerides normal (type IIA), several clinical possibilities must be considered: (1) The cause can be monogenic familial hypercholesterolemia; the cholesterol will be in the range of 400 mg/dl if inherited from one parent, 800 mg/dl if from both. The biochemical defect is inherited as an autosomal dominant and it is characterized by coronary artery disease early in life. (2) The cause can be polygenic, in which hereditary patterns are not clear. The serum cholesterol generally runs about 300 to 325 mg/dl. (3) It can be due rarely to excess dietary intake of cholesterol, such as in body builders who eat a dozen eggs a day. (4) It can be due to disease, a common and important one being unrecognized myxedema.

Patients with the familial disorder require dietary treatment but that does not control them; they require drug treatment as well. Usually the drugs of choice are a combination of cholestyramine and nicotinic acid or possibly probucol. Plasma levels of cholesterol can be controlled in about 75% of those patients down to levels of 200 mg/dl or below with a combination of drugs. The polygenic form will usually respond to the prudent diet. The hypercholesterolemia of dietary origin responds to diet change. The fourth category should be treated with whatever the disease process requires.

Now, a little further discussion on the type of abnormality of our patient today, type IV-V with high serum triglyceride. With weight reduction, serum triglycerides usually will come down. Further control can be maintained with a prudent diet, emphasizing low sugar intake and no alcohol.

For long-term control, you have to decide whether there is a purely genetic basis or if the type IV-V disorder is related to diabetes and the insulin mechanism I described earlier, or if it is related to obesity, to alcohol, to high sugar intake, or to use of birth control pills. About two thirds of these latter forms can be controlled with weight reduction, stopping alcohol or hormones, and changing to the prudent diet. If the triglycerides are severely elevated and weight reduction and diet do not provide control, clofibrate or a new similar drug, gemfibrozil, can be useful. If it is still not controlled, another drug possibility is nicotinic acid. Generally these drugs should not be used unless diet has failed and chylomicrons, with the risk of pancreatitis, are present.


For abnormalities of the combined type, i.e., a combination of both β and pre- β hyperlipoproteinemia (type IIB), the treatment is just a combination of the treatment for type IIA and type IV, including at all times a combination of drugs.

Summary of Therapy

If the serum cholesterol is high and triglycerides are normal, there is usually an LDL excess (β -lipoprotein) or type IIA. It may be of monogenic familial origin, and rare (one in 500), or it may be polygenic, which is common, with probably 15% of the population affected. The monogenic form requires diet and combination drug therapy; the polygenic form responds generally well to the prudent diet alone.

When the serum triglycerides are more elevated than cholesterol, there is usually an excess of VLDL (pre- β -lipoprotein, or type IV, or type V if triglycerides are above 1,000). The treatment is cessation of alcohol and weight reduction, following the prudent diet; because of the potential for pancreatitis, clofibrate may be necessary if chylomicronemia persists.

The third common lipid abnormality, type IIB, in which cholesterol and triglyceride are about the same, each averaging about 350 mg/dl, is a combination of increased LDL and VLDL. Generally dietary treatment improves it, though drugs, including combinations, may be required.

The patient presented today had a classic type IV-V disorder associated with diabetes and overweight. He had high triglycerides and elevated cholesterol. Weight reduction by caloric restriction and an effort to reduce insulin requirement while maintaining good blood sugar control would be the first step. Following this, weight maintenance coupled with ideal diabetic control (for type II diabetic patients, usually leanness, diet and no insulin) is sufficient. If not, consideration of the use of clofibrate can be given if triglyceride levels remain close to 1,000 mg/dl. 

Acknowledgment:

Figure 1 is reproduced with permission from Bierman EL, and from *Current Concepts*, The Upjohn Co., Kalamazoo, 1976.

REFERENCES

1. Basta LL, Williams C, Kioschol JM, et al: Regression of atherosclerotic stenosing lesions of the renal arteries and spontaneous cure of systemic hypertension through control of hyperlipidemia. *Am J Med* 61:420, 1976.
2. Frederickson DS, Levy RI, Lees RS: Fat transport in lipoprotein—an integrated approach to mechanisms and disorders. *N Engl J Med* 276:32, 1967.
3. Brown MS, Goldstein JL: Familial hypercholesterolemia: Genetic, biochemical and pathophysiologic considerations. *Adv Intern Med* 20:273, 1975.
4. Claiborne C: *Craig Claiborne's Gourmet Diet*. New York, Ballantine, 1981.

CAT Scan of the Month

STEPHEN L. GAMMILL, M.D., and LARRY NEWMAN, M.D.

A 29-year-old man was admitted to the hospital with an undescended testicle on the right. Physical examination was normal. Please examine Figures 1 and 2, and see if you can identify the undescended testicle, and also, if you can ascertain whether it is intraperitoneal or extraperitoneal.

Discussion

Note the ovoid opacity to the right of the midline. A similar opacity cannot be seen on the opposite side. We believe this to have been the undescended testicle. It also appears to be beneath the peritoneum anterior to the iliocis muscle. The peritoneal reflection can be identified as a thin line anterior to the undescended testicle and posterior to the radiolucent fat of the anterior abdominal wall. Ultrasonic examination of the pelvis had located the undescended testicle but its position with relation to the peritoneum could not be established. The CAT scan was, therefore, most important in guiding surgical plans toward reaching a decision as to whether an extraperitoneal approach was called for or whether the peritoneum needed to be opened.

Under general anesthesia, a right paramedian incision was made. Upon entering the peritoneal cavity, the testicle was palpated, visualized, and delivered to the midline. It was amputated by transection and ligation of the spermatic cord. The gonad appeared somewhat atrophic in size but normal in consistency and color. The patient recovered satisfactorily postoperatively. Removal of the undescended testicle was advisable, as they are more prone than normal testicles to develop malignancy.

From the Departments of Radiology and Urology, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146.

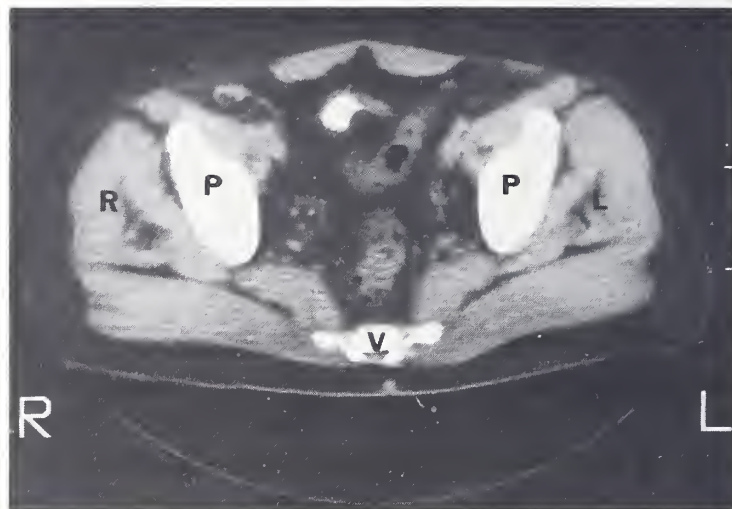


Figure 1. Tomographic cut through the pelvis (R = right, L = left, P = iliac bone of pelvis, V = sacral vertebra).



Figure 2. Magnified view of the undescended testicle.

FINAL DIAGNOSIS: Intraperitoneal undescended testicle.

Benefits of Childhood Immunization Programs

In July 1796, Edward Jenner inoculated James Phipps with cowpox signaling the first control measure for the disease. In October 1977, Ali Maow Maaliu contracted smallpox—the last confirmed indigenous case in the world! In May 1980, the World Health Assembly confirmed global eradication of smallpox, the first disease in the history of man to be deliberately eradicated from the whole world. This represents 181 years of smallpox vaccinations.

Although there is no other disease that will similarly be eradicated worldwide in the near future, within the United States, and more specifically in Tennessee, many of the childhood diseases are being reduced to a level where we reasonably can expect that non-imported disease will be eliminated because of the immunity status of the population, especially the children.

Table 1 compares the reported cases of vaccine-preventable childhood diseases in Tennessee for 1980 and 1981. This indicates that current vaccination programs, both public and private, supported by the National Childhood Immunization Initiative, are reducing the incidence of these diseases.

As the incidence of vaccine-preventable diseases falls, people tend to forget the frequent, life-threatening complications such as pneumonia and encephalitis, as well as the long-term or permanent sequelae such as blindness, deafness, paralysis, and mental and physical retardation. The incidence of vaccine-related reactions then is seen as more important. Most young parents today do not know the fear experienced when an outbreak of one of these diseases occurs in their hometown or neighborhood—the fear that their young child will not survive an attack or will be disabled, be it diphtheria, measles, pertussis, or poliomyelitis. The once ever-present reminders of these outbreaks, such as crutches or wheelchairs, or children committed to institutions, are no longer conspicuous.

From the Tennessee Department of Public Health, Nashville.

TABLE 1

**VACCINE-PREVENTABLE CHILDHOOD DISEASES
IN TENNESSEE, 1980-1981***

Diseases	Reported Cases		Difference	
	1980	1981	No.	%
Measles	170	2	- 168	- 98.8
Mumps	33	23	- 10	- 30.3
Rubella	41	13	- 28	- 68.3
Tetanus	3	1	- 2	- 66.7
Pertussis	37	16	- 21	- 56.8

*Reported to Health Statistics, TDPH.

Since the 1976 Swine Flu Virus Vaccine Program, a great deal of attention has been focused on the risks involved in administration of a vaccine. No one in the health field denies that there are some risks associated with immunizations. However, by comparing the risks of a disease and its sequelae with the risks from the vaccination for prevention, a clear perspective is possible. As an example, the most serious complication of measles is death resulting from respiratory or neurologic causes. This occurs once per 3,000 reported cases of measles,¹ but only once every 5 million doses of measles vaccine administered. Today, when nearly all children are receiving measles vaccine, the risk of the disease and a life-threatening complication seem remote. If vaccinations were stopped, the number of measles cases would increase rapidly, producing a sharp increase in deaths and other sequelae associated with measles.

Another example is the recent furor over pertussis immunizations. A study of reactions from the pertussis vaccine² indicates that minor effects, such as swelling or mild pain at the injection site or low grade fever, are common. However, it is estimated that the more serious reactions, encephalitis with residua or fatal encephalitis, each occur approximately once for

(Continued on page 551)

W. BARTON CAMPBELL, M.D.

A 58-year-old man had abrupt occurrence of left hemiparesis. On hospital admission he was disoriented and his electrocardiogram showed evidence of inferior myocardial infarction and atrial fibrillation with a ventricular rate of 36/min. An echocardiogram showed diminished posterior wall contractility. Within the next few days he became alert and oriented, and his hemiparesis resolved. Electrocardioversion was carried out with a single 200 joule DC shock which resulted in sinus rhythm with a PR interval of 0.32 seconds. One hour later he again had atrial fibrillation. Quinidine was started and two days later he reverted to sinus rhythm with intermittent episodes of second degree block.

Because of his conduction problem, a Cordis Lambda 206A unipolar permanent pacemaker was implanted. He was discharged from the hospital with satisfactory pacing at a rate of 71/min. Thyroid function studies were within normal limits.

Three years later he began to have intermittent feelings of "faintness" not resulting in syncope. These feelings of near syncope occurred most commonly when he was working with his arms. When seen in the office for a pacemaker evaluation, he had a pacemaker click and rhythm strips showed a paced rhythm at 71/min. Premature ventricular depolarizations were noted to appropriately inhibit the next pacemaker spike.

Discussion

Because of these premature beats a 24-hour Holter electrocardiogram was obtained (Fig. 1). This tracing is a section of the Holter scan obtained with a two-channel recorder. The top two strips represent the first and second channels obtained simultaneously while the bottom two strips were also obtained simultaneously.

The upper two rhythm strips show the first two beats to be normally paced at an interval of 0.84 seconds. The third beat represents a premature ventricular depolarization which appropriately inhibits the pacemaker. A second premature ventricular depolarization follows the next five normally paced beats. This also appropriately inhibits the pacemaker. The lower two rhythm strips (time 19:22:30) again show that the first four beats are normally paced. Following this, however, there is a prolonged pause with no pacemaker spike

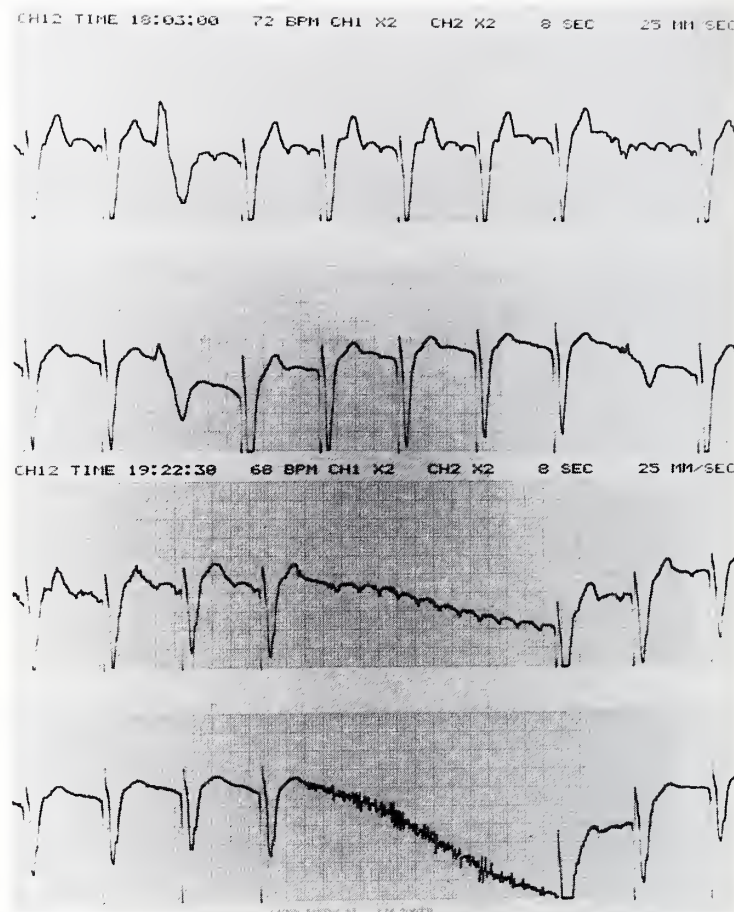


Figure 1

and no apparent premature contractions. The bottom channel shows irregularity in the baseline probably due to skeletal muscle depolarization. No escape rhythm emerges and the pause between QRS complexes is very prolonged at 3.2 seconds. Atrial flutter waves at a rate of 290 are present.

This rhythm strip exhibits an example of unipolar pacemaker inhibition due to electromagnetic interference from skeletal muscle depolarization. The pulse generator when checked in the office showed normal inhibition and pacing, and a longer period of observation utilizing ambulatory monitoring was necessary to display this problem.

Oversensing and false inhibition of the pulse generator due to skeletal myopotentials have been

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.


reported to occur in up to 38% of patients who have unipolar pacemakers.¹ Fourteen percent of this reported group had symptoms related to their pacemaker inhibition. The presence of Sialastic coating on the pulse generator was noted to have no effect on the sensing of myopotentials. Unipolar pacing is a more sensitive mode for detection of changes in electrical potential and has been advocated to decrease undersensing (lack of R wave inhibition of the pulse generator). Unipolar undersensing can also be a problem however and the paper by Secensky and colleagues¹ suggested that undersensing occurred in 17% of Holter monitored patients despite the presence of adequate R wave amplitude.

It is estimated that two thirds of patients in this country are now receiving unipolar pacemaker units. Unipolar leads are being increasingly used with dual chamber pulse generators and it is anticipated that electromagnetic interference

will continue to be a problem with these newer models. Office examination of pacemaker function will usually not demonstrate the effects of electromagnetic interference due to myopotentials. The possibility of myopotential pacer inhibition should be examined with upper extremity exercise and Holter recordings if the history is suggestive of lack of proper pacing.

The above patient has not had pacemaker revision but has been cautioned against excessive pulling and exercise utilizing his arms.

To this point he has had no further episodes of near syncope.

DIAGNOSIS: Unipolar pacemaker inhibition due to increased skeletal myopotentials. 

REFERENCES

1. Secensky SI, Hauser RG, Denes P, et al: Unipolar sensing abnormalities: Incidence and clinical significance of the skeletal muscle interference in undersensing in 220 patients. *Pace* 5:10, Jan-Feb, 1982.

Public Health Report . . .

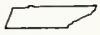
(Continued from page 549)

every 1.5 million doses of vaccine. Pertussis, on the other hand, is expected to produce a death for each 2,000 cases, and encephalitis with residua once for every 20,000 cases. In addition, whooping cough in its uncomplicated form is a nasty disease that lasts six to eight weeks. The life of modern young families would be stressed if mothers were constantly needed at home to care for the coughing, vomiting, miserable, sick children. The cost/benefits ratio for prevention is obvious.

The continued routine, early, adequate immunization of children is urgent. Diphtheria, pertussis, tetanus, and poliomyelitis have been well controlled in Tennessee for more than a decade. We are so close to eliminating measles from our

population that it is possible to reach that goal by the end of 1982; mumps and rubella, however, may require the next seven years.

Immunization is cost-effective not only in saving health care funds but also in prevention of human suffering, an objective to which we are all dedicated.

For further information about the Immunization Program of the Tennessee Department of Public Health, call Henry B. Woodard at (615) 741-7343. 

REFERENCES

1. Measles prevention. Center for Disease Control. *Morbidity Mortality Weekly Rep* 31:217, 1982.
2. Cody CL, et al: Nature and rates of adverse reactions associated with DPT and DT immunizations in infants and children. *Pediatrics* 68:650, 1981.

Candidates for nutritional therapy.

10,000,000

alcoholics. Ethanol may produce many effects that together bring about nutritional deficiencies, so that alcoholism affects nutrition at many levels.¹

25,500,000 geriatric

patients. The older patient may have some disorder or socioeconomic problem that can undermine good nutrition.²

23,500,000 surgical

patients. Nutritional status can be compromised by the trauma of surgery; and some operations interfere with the ingestion, digestion and absorption of food.³



Before prescribing, please consult complete product information, a summary of which follows:

Each Berocca® Plus tablet contains 5000 IU vitamin A (as vitamin A acetate), 30 IU vitamin E (as *dl*-alpha tocopheryl acetate), 500 mg vitamin C (ascorbic acid), 20 mg vitamin B₁ (as thiamine mononitrate), 20 mg vitamin B₂ (riboflavin), 100 mg niacin (as niacinamide), 25 mg vitamin B₆ (as pyridoxine HCl), 0.15 mg biotin, 25 mg pantothenic acid (as calcium pantothenate), 0.8 mg folic acid, 50 mcg vitamin B₁₂ (cyanocobalamin), 27 mg iron (as ferrous fumarate), 0.1 mg chromium (as chromium nitrate), 50 mg magnesium (as magnesium oxide), 5 mg manganese (as manganese dioxide), 3 mg copper (as cupric oxide), 22.5 mg zinc (as zinc oxide).

Indications: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.

Contraindications: Hypersensitivity to any component.

Warnings: Not for pernicious anemia or other megaloblastic anemias where vitamin B₁₂ is deficient. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with vitamin B₁₂ deficiency who receive supplemental folic acid and who are inade-

quately treated with B₁₂.

Precautions: General: Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. **Information for the Patient:** Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. **Drug and Treatment Interactions:** As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.

Adverse Reactions: Adverse reactions have been reported with specific vitamins and



GEORGE W. HOLCOMB, JR.

Medical Costs—The Good News and the Bad

The good news is that health care rendered by physicians in America today is the best available anywhere in the world. And the bad news—it is increasingly expensive. The annual medical expenditure in the United States has risen from \$65.3 billion in 1970 to \$217.9 billion in 1980. If this rate is not altered by 1990, annual health costs are estimated to exceed \$1 trillion. This crisis already mushrooming in our midst will directly affect and completely alter the way medicine is practiced in this country in the next decade.

Government, labor, and industry have indicated a determined effort to reduce health costs. Certainly we are aware of the current support and promotion of HMOs, IPAs and other prepaid health delivery mechanisms. The providers of service, hospital administrators, and insurers also have indicated an interest in reducing costs but their efforts in achieving this goal have been less dramatic. Perhaps this response stems from a genuine concern that either patient care will suffer or medical liability will be increased. Historically the AMA has advised that medical care can be delivered efficiently without restricting the physician's ability to provide quality care. This is probably true

but I don't think it is universally accepted by all health providers.

The most recent innovation gaining support for cost containment is the formation of voluntary coalitions for health care. This unique approach brings together representatives of labor, industry, business, hospitals, public health officials, insurance carriers and physicians for a combined and serious effort to curb medical expenditures for local areas. Such coalitions may work in the future because industry and government can no longer pay the spiraling medical bills. To be effective, however, all participants must be willing to bury their suspicions and mediate their differences. Physicians and medical educators must become aware of their prominent role and their primary influence in this economic picture. We may not want to but we *can* review our standing orders, we *can* be more reluctant to allow patients or families to prolong hospitalization unnecessarily, we *can* utilize one day surgical units more often, we *can* limit some expensive tests, examinations, and drugs when cheaper ones will suffice, and we *can* take the time to review patients' hospital bills periodically.

It is also necessary that the patient should be re-educated about the fundamentals of good health and wellness. We have several generations of fast food addicts and automobile buffs to influence. They should be educated about the importance of routine exercise, sensible eating habits, and avoidance of tobacco, drug and alcohol abuses. The gross expenditure of mending bodies from automobile accidents is staggering. We must arouse the public to support every effort to take the alcoholic driver off the highway, to protect our infants with regular use of child restraints and to re-introduce safety first programs in our schools. Executives and workers should be willing to forego first dollar coverage and accept deductible insurance which is cheaper and curbs the overutilization by some patients. Unnecessary emergency room visits for routine ailments which could be managed during regular office hours also should be curtailed.

If it be true that 70% of hospital costs are determined by physicians, there is no doubt that we can do a better job in our individual practices. Indeed we walk a fine line between economic efficiency and the highest quality care for our patients. However, if our present pluralistic system of medical care is to survive, it is absolutely necessary that we use all means available to contain costs and we should support the business community as new solutions are sought. The complete cooperation of the employer, the unions, hospitals, insurers, physicians, and consumers is necessary to manifest any significant improvement in rising health costs.

George Holcomb Jr MD

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR
ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR
JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202
Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. MCCALLUM, M.D., Chairman, Henderson
GEORGE W. SHANNON, M.D., Jackson
CLAUDE H. CROCKETT, JR., M.D., Bristol
H. VERDAIN BARNES, M.D., Chattanooga
FRANCIS W. GLUCK, JR., M.D., Nashville
JOHN B. THOMISON, M.D., Nashville, Ex-Officio

AUGUST, 1982

editorials

Into and Out of the Quagmire—We Hope

In mulling over developments in continuing medical education (CME) in this country, I have been tempted to tell you that an end to the struggle for control that has been going on for about five years now is drawing to a close, with results that, although they may not be ideal for everyone, appear satisfactory for you. The various turns

of events of the past few years, however, tend to temper both optimism and enthusiasm, and so I will simply report the situation as it presently appears to me—a sort of progress report that portends a satisfactory conclusion, but with the caveat that there is many a slip twixt the cup and the lip.

As with almost everything else I can think of, the CME issue is a mixture of information and misinformation, of ideals, pragmatism, and cynicism, of clear and cloudy vision, and of well-directed and misdirected missionary zeal—all with a strong overlay of politics and personal ambition. It is that overlay that makes the going most difficult, but that is the way things and people are, and we have to live and work under that cloud. It is why one had better not count the birds in the hand before they are hatched. They are now hatching, but they are still in the bush.

For a brief moment, let's look at the fertilization, conception, and incubation of the system. Some time before 1970, because of accusations that once they got out from under the ivy-covered walls, doctors ceased trying to learn anything except how to make money, the AMA, and stimulated from above, the states, set about erecting a structure to provide CME, and to monitor its quality and effectiveness. Bowing to political pressures from a variety of sources, which implied that because medicine (the AMA) was accrediting and evaluating itself and therefore could not be objective about it, the AMA took it upon itself to form the LCCME, on which its four representatives served along with three from each of several other bodies. Because the members of the AMA federation and their component societies felt they were badly served by the chaotic LCCME, the AMA abandoned its brainchild, and began once again doing what it had been doing so well before.

In a surprise move that left most of us discomfited and with a sense of *déjà vu*, the AMA (staff and board) joined with the other parents of the old LCCME to form the Accreditation Council for Continuing Medical Education (ACCME). Since most of us in the state societies felt we had been had, the House of Delegates set up a mechanism through its Council on Medical Education for monitoring closely the workings of the ACCME and assuring input from the states. It was difficult to see at the time how this body would act any differently from its predecessor.

The first action of the ACCME was to promulgate some new *Essentials* to replace those that

had been in use, with numerous modifications, for over a decade. It was obvious the new ones suffered from many of the defects of the old ones, the main objection being that they were written with large organizations and institutions in mind. While it is clear, and almost universally agreed to, that programs of inferior quality should never be acceptable simply because they came from a lesser source, those of us in the state societies and members of the House know that these same lesser organizations are capable of high quality performance, an opinion apparently not shared by some individuals in medical education circles, who continue to maintain that all medical education, including CME, should be carried out only in the hallowed halls.

Since it was apparent the *Essentials* formed only a skeleton, and that their application is all important, and since the ACCME had stated that their application would be spelled out in a handbook to be released later, the House voted last December to approve the *Essentials* contingent upon development of a suitable handbook. With that, the ACCME proposed to abandon the handbook and develop guidelines to apply only to national organizations, letting the states develop their own guidelines for their own purposes.

Now while on the face of it this would seem to be a reasonable proposal, and, to be charitable, was likely seen as such by the ACCME, it failed to take into account political and judicial practicalities, which are that regardless of what anyone thinks or intends, once the national guidelines were approved, they would for purposes of federal agencies and the courts become binding upon the states. The Council on Medical Education, and through their urging the House, kept their wits about them, and proclaimed at the Annual Meeting in June that the *Essentials* should be approved contingent this time upon the acceptability of the guidelines. The Council further volunteered the services of its Advisory Committee on Continuing Medical Education, on which both Dr. Tommy Ballard, of Jackson, and I serve, to draft the guidelines. So much for history.

As a way of assuring communication with the states, the ACCME has continued the policy, begun by the LCCME, of inviting four state CME chairmen in rotation to attend each meeting, and to further assure input established an ad hoc committee of three state chairmen—Perry Culver, of Massachusetts, John Hinchey, of

Texas, and Merle Pennington, of Oregon—to develop criteria for accreditation (or, to use the current term, “recognition”) by the ACCME of state accreditation programs.

It was Tennessee’s turn to send a representative to the meeting of the ACCME earlier this week, and as chairman of your CME committee I attended. This is to report to you the current situation as I perceive it.

I was in attendance, in the same capacity, at an early meeting of the LCCME, which I found totally chaotic. No one knew what he was about, or apparently even how to find out. I am told it never improved much. I have also been told the early meeting or so of the ACCME (this was their fifth) shared some of the same difficulties. So I was gratified to find the Council and its three committees—one on procedures, one on planning and educational development, and a third, with an independent membership, the Review Committee—to be well organized and thoroughly capable, having done their homework well. The Review Committee had ahead of time circulated to the full Council their recommendations, with a brief summary, on the 50-odd organizations and institutions it had reviewed. Consequently, while all those being recommended for anything less than full accreditation had a complete hearing, the entire report was handled with dispatch. Throughout the meeting members were not bashful about presenting and defending disparate viewpoints, but it was all done with the general good will one has a right to expect, but does not always find, among individuals pursuing a common goal. The states were well represented by the three AMA Medical Education Council representatives and the ad hoc committee, and the floor was also open to the invited state representatives.

The ACCME accepted the offer to have the Advisory Committee draft the guidelines; it is to complete them at its September meeting for presentation through the Council on Medical Education, which meets later that month, as a draft document to the ACCME workshop immediately preceding the AMA meeting of the state CME chairmen the first of October. Although a number of steps, including approval by each parent, are necessary before the guidelines, and consequently the new *Essentials*, can be implemented, it is hoped the process can be completed in time for their use by the beginning of 1984.

There are still, and of course always will be, problems. But from what I saw I was encouraged

to believe we have a workable system to insure, as much as it is possible to do so, continuing medical education of high quality for the welfare of our patients, while at the same time protecting the interests of the various components of the health care system represented on the ACCME, even though these may sometimes be, or at least appear to be, in conflict. That is quite an accomplishment.

Perhaps we are at last rising from the bog.

J.B.T.

On the Intimation of Mortality

Forty years ago this June I was graduated from Vanderbilt University's College of Arts and Science, but more pressing at the time was my introduction as a second year medical student to the then seldom perceived joys of pathology, along with bacteriology and pharmacology. The United States was just beginning to recover from the trauma of Pearl Harbor, and a good part of the male membership of my undergraduate class was already assisting in that process. Unlike the vivid memories I have of my medical school graduation a couple of years later, those of this one are faded and dim, as the times rendered the act almost inconsequential.

Thanks to some dedicated effort and a few WATS lines, a good percentage of our class of somewhere around 200 students made it back to the campus last month for our fortieth reunion. It was gratifying to find that outwardly most of us had changed so little. The faces above the class photographs pasted to our badges were identifiably the same faces—sometimes a little fuller, with less hair here and there, and always with a few or sometimes a lot more lines, but nevertheless the same. While not many of us could fit into our old uniforms, most looked to be in pretty good shape. The girls had mostly done it better than the men.

It took some triumphs of medical science to get a lot of us back—or anywhere else. A generation back, the ranks would have been seriously depleted by such things as a leaking aortic aneurysm, blocked coronary arteries, polymyositis, nephritis, and so on, but modern surgery, renal dialysis, steroids, and other wonder drugs had the "proud" possessors of those and other unnamed and to me often unknown maladies

looking—and usually feeling—fit as a fiddle, so to speak.

On the other hand, there is nothing like a reunion to emphasize man's mortality. Quite early, the war left some gaps, and attrition set in almost coincidentally. We lost one member only a couple of weeks before he was to return to this reunion. In the years between, others fell, and at this stage of our existence, the pace can be expected to pick up, as even modern medical science has its limits. Those we lost to military action were in uniform, but if there is a next one, such will clearly not be the case.

It is pleasant to visit with old chums (and in a class the size Vanderbilt's used to be, most were), especially when, as was sometimes the case, there has been a separation of forty years. Just for a moment, time was rolled back, and we relived the good old days, the bad old days laid aside in honor of the occasion. Whether it will ever be our privilege to do it again will always remain uncertain. The only certainty is that some of us will never be "Quincs," Vanderbilt's name for 50-year graduates. Who they will be, we are not given to know. But then, who wants to?

J.B.T.



Medicolegal Autopsies

To the Editor:

In the June issue of the *Journal of the Tennessee Medical Association* (75:393, 1982), concerning Resolution No. 12-82 by Dr. Richard L. Hobart of Knoxville, it is stated in the second paragraph in Tennessee only the coroner or medical examiner can order an autopsy on such patients. I should like to point out that unfortunately in the state of Tennessee the only individual who can order an autopsy is the District Attorney General. It would indeed be preferable for a physician to determine whether an autopsy should be ordered on anyone who arrives DOA and remove the Attorney General from the scene, however our State Legislature has not seen fit to authorize such.

Halbert B. Dodd, II, M.D.
1020 Reelfoot Ave.
Union City, TN 38261

in memoriam

O. Reed Hill, age 74. Died June 12, 1982. Graduate of Vanderbilt University School of Medicine. Member of Wilson County Medical Society.

Benton Briggs Holt, Jr., age 66. Died June 5, 1982. Graduate of Vanderbilt University School of Medicine. Member of Chattanooga-Hamilton County Medical Society.

J. A. James, age 90. Died June 1, 1982. Graduate of Vanderbilt University School of Medicine. Member of Memphis-Shelby County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

BLOUNT COUNTY MEDICAL SOCIETY

Stephen D. Pershing, M.D., Maryville

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Michael Douglas, M.D., Chattanooga
Fred Laurel Perez, Jr., M.D., Chattanooga

GREENE COUNTY MEDICAL SOCIETY

Stanley A. Giles, M.D., Greeneville

KNOXVILLE ACADEMY OF MEDICINE

Jack Benhayon, M.D., Knoxville
Soung-Ho Park, M.D., Knoxville

LAWRENCE COUNTY MEDICAL SOCIETY

Thomas L. Schumann, M.D., Lawrenceburg

MARSHALL COUNTY MEDICAL SOCIETY

Richard E. Fishbein, M.D., Lewisburg

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

William Robert McKenna, M.D., Memphis
John B. Rada, III, M.D., Memphis
Craig J. Sander, M.D., Memphis
Galen Richard Smith, M.D., Germantown
W. Burke Wade, M.D., Memphis
Frank G. Witherspoon, Jr., M.D., Memphis

(Student Members)

Russell D. Beis, Memphis
Sally B. Clark, Memphis

George E. Fant, Memphis
M. Martin Kirk, Memphis

NASHVILLE ACADEMY OF MEDICINE

Paul C. Alexander, M.D., Nashville
Robert I. Brimmer, II, M.D., Nashville
Mary Catherine Dundon, M.D., Hendersonville
Sharon J. Durant, M.D., Nashville
Robert L. Estes, M.D., Nashville
Winston H. Griner, M.D., Nashville
Richard F. Gutow, M.D., Nashville
Henry S. Jennings, M.D., Nashville
Bruce M. Kauder, M.D., Nashville
Vijay R. Makrandi, M.D., Nashville
Erlinda A. Martinez, M.D., Nashville
Charles E. McKay, III, M.D., Nashville
Paul R. Michael, M.D., Nashville
Barbara J. Olson, M.D., Nashville
Jorge Rojas-Brassetti, M.D., Nashville
Harold P. Smith, M.D., Nashville
Frank Karl VanDevender, M.D., Nashville

WARREN COUNTY MEDICAL SOCIETY

Uldis A. Knochs, M.D., McMinnville

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

David G. Doane, M.D., Johnson City
Chris L. Gillespie, M.D., Johnson City
David P. Lurie, M.D., Johnson City
Matthew S. Smith, M.D., Johnson City

personal news

W. Barton Campbell, M.D., Nashville, long-time contributor of the EKG of the Month in the *Journal*, has been named president of the Tennessee affiliate of the American Heart Association for 1982-1983.

Douglas C. Cobble, M.D., Greeneville, has been elected to Fellowship in the American Academy of Pediatrics.

Louis Rosenfeld, M.D., Nashville, has received the 1982 Peabody Demonstration School/University School of Nashville Distinguished Alumnus Award.

The following TMA members have been certified as Diplomates of the American Board of Surgeons: *Maurice S. Rawlings, Jr., M.D.*, Chattanooga; *Jeffrey L. Wallace, M.D.*, Livingston.

The following TMA members have been elected to Fellowship in the American College of Physicians: *William R. Bolin, M.D.*, Athens; *Albert F. Heck, M.D.*, Memphis; *Clark R. Gregg, M.D.*, Nashville; *Phillip M. Ricks, M.D.*, Oak Ridge.

TMA Members Receive AMA Physician's Recognition Award

Sixty-seven TMA members qualified for the AMA Physician's Recognition Award during May, 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

James T. Allen, M.D., Murfreesboro
J. Kelley Avery, M.D., Union City
Harvey H. Barham, M.D., Bolivar
John M. Bishop, M.D., Somerville
William E. Bost, M.D., Oak Ridge
James R. Boyce, M.D., Athens
William D. Brackett, M.D., Chattanooga
Donald H. Bradley, M.D., Sparta
Lloyd R. Broomes, M.D., Madison
Bruce B. Brown, M.D., Union City
John S. Burrell, M.D., Lake City
Louis A. Cancellaro, M.D., Johnson City
Warner L. Clark, M.D., Church Hill
Clyde E. Collins, M.D., Dickson
Lloyd C. Davis, M.D., Knoxville
Thomas C. Duncan, M.D., Nashville
Roy C. Ellis, M.D., Harrogate
Paul A. Ervin, M.D., Crossville
Irving K. Ettman, M.D., Memphis
James O. Fields, M.D., Milan
Raymond A. Finney, M.D., Maryville
Joe F. Fleming, M.D., Kingsport
William C. Francis, M.D., Cookeville
Jack R. Halford, M.D., Memphis
Charles B. Harvey, M.D., Tullahoma
Thomas H. Hetrick, M.D., Knoxville
Frank L. Jayakody, M.D., Shelbyville
Sue P. W. Johnson, M.D., Shelbyville
Jayakumar R. Kambam, M.D., Nashville
Robert D. Kirkpatrick, M.D., Memphis
Howard S. Kirshner, M.D., Nashville
Robert E. Knowling, M.D., Knoxville
Sarma R. Kunda, M.D., Chattanooga
J. T. Layne, M.D., Copperhill

Melvin G. Lewis, M.D., Lewisburg
George W. Marten, M.D., Memphis
Russell W. Mayfield, M.D., Bells
Preston C. McDow, M.D., Chattanooga
Thomas B. McGinnis, M.D., Johnson City
Ewing W. McPherson, M.D., Nashville
Jimmy A. Meeks, M.D., Parsons
Herbert J. Michals, M.D., Kingsport
Tony J. Montgomery, M.D., Clarksville
Marion R. Moore, M.D., Memphis
William M. Murphy, M.D., Memphis
James L. Nash, M.D., Nashville
Harry K. Ogden, M.D., Knoxville
Homer C. Ogle, M.D., Knoxville
James D. Panzer, M.D., Cookeville
Howard C. Pomeroy, M.D., Old Hickory
James H. Ragsdale, M.D., Union City
Warren C. Ramer, M.D., Lexington
Charles L. Roach, M.D., Sevierville
Wen T. Shiao, M.D., Nashville
James C. H. Simmons, M.D., Memphis
Archibald Y. Smith, III, M.D., Signal Mtn.
Brent A. Soper, M.D., Madison
Peter G. Stimpson, M.D., Loudon
James B. Talmage, M.D., Cookeville
Carson E. Taylor, M.D., Lawrenceburg
John C. Thornton, Jr., M.D., Brownsville
Joe R. Troop, Jr., M.D., McMinnville
John B. Turner, M.D., Springfield
William C. Walley, M.D., Kingsport
Charles H. Webb, M.D., Tullahoma
Thomas W. Williams, M.D., Etowah
John M. Wilson, M.D., Memphis

national news

From the AMA's Office in Washington, D.C.

Health Programs Sink as Deficit Climbs

Federal health programs would be hard-hit under the budget resolution that House Republicans, bolstered by conservative Democrats, managed to push to a "second-try" victory.

The budget vote of 220-207 was a major win for the Reagan administration which had supported the GOP budget plan before the House. Since the administration also had backed the Senate budget, the final outcome on the budget resolution will be satisfying to the administration.

The big question, however, was whether the authorizing and appropriating committees this time around will abide by the budget restrictions contained in the resolutions.

The next step is for House and Senate conferees to agree on a compromise version of the budget that can win approval in both Houses.

On the broad scale, the House bill called for a \$100-billion deficit next fiscal year, while the Senate bill

contemplated a \$116-billion deficit. The original administration budget proposed a \$122-billion deficit.

The House budget would freeze at current levels spending on discretionary health programs. Medicare projected outlays would be trimmed by \$11.5 billion over the next three years; Medicaid, by \$6.6 billion. The Senate budget reductions for the same period were \$17.9 billion and less than \$3 billion.

The final House Medicare figure was some \$12 billion below the three-year-cut level of \$23 billion contained in the GOP budget package that was voted down when the House first brought up the budget issue early in June only to have all plans before it turned down. The Republicans toned down the Medicare cuts and made other adjustment to help secure the votes for passage when the House brought up the budget for the second time.

Although the willingness of the respective committees to go along with the budget proposals remains in doubt, there is no question that the passage of the budget resolution puts increased pressures on the lawmakers to make large economy provisions for Medicare and Medicaid. Most of the Medicare "savings" in the two budget measures, which are fairly similar in this respect, come from reimbursement restrictions such as prospective payments to hospitals, delaying the annual physician fee screen by three months, elimination of the nursing differential, and bringing federal employees into Medicare for the first time (collecting several billions of dollars in Social Security taxes).

Medicare Cuts Seen Certain

Congress continues to move step-by-step closer to the enactment of cutbacks in Medicare despite wide concern with voter reaction in this election year.

Demonstrating that state-of-the-economy sentiment and worry over budget deficits remain paramount concerns, Congress agreed on a budget resolution calling for deep reductions in projected Medicare expenditures. The Senate Finance Committee quickly followed up with legislation to carry out the cuts.

A favorable vote in the Republican-controlled Senate appears to have a good chance. But the House, in Democratic hands, might balk.

Most of the major health provider groups are lined up to fight many of the reductions with the argument that the cuts will force providers to shift more costs to the private sector patients. The American Association of Retired Persons also is preparing an all-out campaign against the economy moves.

The congressional budget resolution adopted after a long struggle called for \$13.6 billion less spending for Medicare over the next three fiscal years than would occur without legislative changes. Medicaid would be trimmed by \$2.2 billion. Discretionary health programs face a \$3.4 billion loss over three years. For the most part, these "cuts" would not diminish spending from this year's levels; rather, the rate of increase would be pared.

The Senate Finance Committee showed it meant to hew the budget line by voting 13-6 for Medicare and Medicaid budget slashes as the first in a series of votes

the committee is taking to carry out its responsibilities over a large share of the federal budget, including taxes.

One of the larger Medicare cuts made by the Finance Committee would have a direct impact on physicians' fees. The committee agreed to a proposal to provide no increase in the economic index for fees next fiscal year and only a 5% increase the following fiscal year. This was much tougher than the administration's original proposal to hold the index next fiscal year to 5%. Some \$320 million would be saved by this proposal, the panel estimated.

In addition, the special 100% reimbursement rate for inpatient radiology and pathology services would be reduced to 80% of reasonable charges after satisfaction of the annual deductible.

Another provision of the bill tightens reimbursement for hospital-based physicians. The amount Medicare will recognize as the reasonable cost of physician services to providers would be limited. The Health and Human Services (HHS) Secretary was directed to issue regulations specifying conditions for reasonable charge payments which deal with the differences between medical specialties, particularly radiology, anesthesiology and pathology.

Medicare liability would be based on the lower of the actual cost of the services to the provider or a reasonable compensation equivalent.

The committee voted to prohibit reimbursement for assistants at surgery in hospitals with a surgical training program except under such medical circumstances as team physicians performing complex procedures such as coronary bypass operations; or concurrent care when a medical specialist also provides or is available to provide care during a surgical operation if the patient has another condition requiring care that the surgeon is unable to perform.

The brunt of the economies would be borne by hospitals. A more restrictive reimbursement formula for routine bed, board and nursing costs would save \$670 million next fiscal year starting Oct. 1. The limitation would include ancillary costs such as laboratory services, x-rays, drugs, etc. The HHS Department was directed to come up with a prospective reimbursement plan within a year.

The private room "subsidy" would be eliminated.

One of the larger savings—\$750 million—comes from a bookkeeping provision delaying final reimbursement for hospitals from the end of the current fiscal year until the next fiscal year.

Larger employers—those with 25 or more workers—would be required to offer employees aged 65 through 69 private medical insurance that would be first payor ahead of Medicare, estimated to save the government program more than \$300 million a year.

The issue of bringing federal employees into Medicare and making them pay the Medicare tax, an administration proposal, will be taken up later by the committee. This would bring in \$600 million to the Medicare fund.

The most sweeping Medicaid provision allows states to require beneficiaries to pay nominal co-payment amounts ranging from 50 cents to \$3. Exempt would be ambulatory services for children and pregnant women.

Cut Mechanics Cause Quarrels

Major providers and insurers of health care registered sharp differences of opinion before Congress on the best approaches to dealing with the problems of rising Medicare costs and health care inflation generally.

The rifts appeared as the House Ways and Means Health Subcommittee opened hearings on proposals to save money in the Medicare and Medicaid program.

The subcommittee has before it the Reagan administration's proposals to achieve savings in Medicare through a number of provisions, a fairly similar set of recommendations accompanying the House-passed budget, and plans offered by organized labor, the health insurance industry, and the American Hospital Association (AHA).

William Felch, M.D., a member of the American Medical Association Council on Legislation, urged the subcommittee to use "extreme caution against undue cost-shifting" as it considers savings plans. Dr. Felch said that "dollar savings that are made from one pocket that just generate commensurate expenditures from another pocket are, at best, illusory. At worst, they can create hardships for some beneficiaries—a situation we all want to avoid."

The AMA witness criticized the proposed programs put forth by the AHA and the Health Insurance Association of America (HIAA) this year. Noting that the AMA has supported prospective Medicare reimbursement for hospitals on an experimental basis, Dr. Felch said "it is another thing, however, to propose a single prospective reimbursement mechanism, such as that proposed by the AHA, to be imposed nationwide without any track record to justify it."

The AHA plan "could create serious inequities and disparities among hospitals and beneficiaries," according to the physician. "It has the potential for creating a two-class hospital system, with disruption in the physician-patient relationship," he said. Hospitals could be placed "at severe risk of inadequate funding based on budget demands," said Dr. Felch.

Turning to the HIAA plan, the AMA witness said it "looks to the single element of health care payment and fails to recognize other equally important issues such as the actual delivery of health care."

"Certain elements of the HIAA proposal appear to be little more than a reiteration of the discredited hospital cost containment plan that was considered by Congress during the Carter administration," he said.

Declared Dr. Felch: "Neither the AHA proposal . . . nor the HIAA proposal is an appropriate answer to Medicare's short- or long-range problems. In the AMA's long-range development of national health policy, we have asked both the AHA and the HIAA to join with us. Through such cooperation we hope to be able to present Congress with a series of proposals that will work to resolve the short-term needs and offer solutions for the long-range needs."

The Federation of American Hospitals weighed in with strong criticism of the HIAA plan. FAH Executive Director Michael Bromberg issued a news release asserting that "the commercial health insurers' package of proposals is a classic example of a large industry

trying desperately to use government to solve its problems."

Bromberg said commercial health insurers "are looking for a government bail-out of their industry. They also are trying to shift the losses they've incurred from fewer customers onto the shoulders of the hospital industry."

At the hearing, officials of AHA and HIAA briefly summarized their proposals. In addition, labor officials assailed the administration's projected cutbacks and urged adoption of their sweeping price control, cost containment plan.

The AMA's Dr. Felch testified that "without a rethinking of how government should be involved with health care in this country Medicare and other governmental health care programs will only become large burdens that could further weigh upon the national economy."

He said this is why the AMA has embarked on a long-range study of federal health programs, "with an ultimate goal being the development of a national health policy."

For short-term purposes, the AMA recommended a list of Medicare program changes, including repeal of mandated state facility review, changes in reimbursement for inpatient radiology or pathology services, extension of the Medicare tax to federal employees, making Medicare second payor for the working aged, indexing the part B deductible, repeal of the Professional Standards Review Organization program, coinsurance for home health services, elimination of the three-day prior hospitalization requirement for skilled nursing care, and elimination of the provider waiver of liability for uncovered Medicare services.

AMA Seeks Independent Contractor Status for the Hospital Based

The AMA has renewed its request that the Internal Revenue Service (IRS) treat hospital-associated physicians as independent contractors.

The issue "goes to the very heart of professionalism," said Jerald Schenken, M.D., a member of the AMA's Council on Legislation. Dr. Schenken told a House Ways and Means Subcommittee that there is no attempt by hospitals "to exercise any control or interfere in any way with the physician's independent exercise of medical judgment on behalf of an individual patient."

Dr. Schenken, who also was testifying on behalf of the American College of Radiology, the American College of Emergency Physicians, and the College of American Pathologists, noted that historically hospital-associated physicians have been considered by the IRS to be independent contractors under the common law "test of control" rules and have not been considered employees of hospitals.

In the late 1960s, the IRS began to enforce, often arbitrarily, a more stringent interpretation of the common law rules and attempted to reclassify many inde-

pendent contractors, including physicians, as employees, according to Dr. Schenken.

In 1978, Congress imposed a temporary moratorium on IRS rulings on the issue. The current moratorium is due to expire next month. Legislation has been introduced to clarify the status of independent contractors. The AMA proposed amendments to the legislation to prevent "further unwarranted reclassification of physicians as employees" that "would disrupt longstanding independent contractor relationships."

Proposed Pension Plan Changes Discriminatory

The American Medical Association charged that legislation before Congress to change tax treatment of pension plans is "highly discriminatory" against professional service corporations.

In a statement to the House Ways and Means Committee, the AMA said the measure (H. R. 6410) "imposes unequal and inequitable treatment on professionals, their employees and certain other providers of personal service."

The bill before the committee, subject of a one-day hearing recently, reduces the maximum contribution to a defined contribution plan by one-third (to \$30,000), reduces benefits from defined benefit plans (to \$90,000), and eliminates the annual cost-of-living increases in these maximum allowances. Retirement plans for professional service corporations would be subject to the same rules as Keogh plans which would be liberalized by increasing the annual contribution limit to \$30,000 a year.

The proposal was brought up less than two months ago. It has stirred a torrent of criticism from the business and professional communities. Full page advertisements appeared in leading newspapers recently featuring an open letter to President Reagan warning that "a disaster threatens America's private pension plans." The letter was signed by officials of the Chamber of Commerce of the United States, the National Association of Manufacturers, the National Small Business Association, the ERISA Industry Committee, and the Association of Private Pension and Welfare Plans.

The administration told the committee that the amount of tax-deferred income corporate pension plans provide executives is "overly generous," but at the same time it urged the lawmakers to proceed cautiously to avoid cutbacks in benefits for rank-and-file employees.

Assistant Treasury Secretary John Chapoton testified that reduction of the limits on tax-deferred contributions "will make it easier to raise the level of deductible contributions to plans benefiting self-employed individuals . . . (and) facilitate the effort to achieve parity between corporate and noncorporate plans."

Chapoton did not specifically back the legislation, sponsored by Rep. Charles Rangel (D-NY), but he indicated general support.

The AMA favored the lifting of the Keogh plan limit to \$30,000, but told the committee that the pro-

posed changes involving Keogh and professional corporations "do not equalize the treatment of self-employed persons and corporate employees."

"Furthermore, the bill subjects shareholders in professional corporations to the Keogh plan limits on contributions and benefits and therefore discriminates against professional service corporations in an unjustified manner."

Under present law, the AMA pointed out, any self-employed person can achieve equality with corporate employees by incorporating his business or professional practice and adopting a corporate pension plan. The Rangel bill would remove this opportunity for professionals by applying the Keogh plan limits to corporations which perform services "in the field of health, law, engineering, architecture, accounting, actuarial science, performing arts, athletics or consulting."

The AMA said "thus the bill for no apparent logical reason discriminates against professionals and their employees by denying them opportunities available to all other individuals regardless of whether they are employed by others or in business for themselves. It would be unique in pension law to create a classification based solely on the 'product' produced by the business."

The effect of the bill is that of a tax-increase proposal "that is inconsistent with the publicly supported administration philosophy to reduce or maintain at present levels the amount of taxes to which a person is subjected," said the AMA.

Feds to Crack Down on Medicare Abuse

The government is readying a potent new weapon to crack down on people who abuse Medicare and Medicaid.

Proposed regulations soon will be printed in the *Federal Register* to carry out a section of a 1981 law that establishes a civil fraud division in the Inspector General office at the HHS Department.

The ability to proceed against abusers by the civil as well as criminal route is regarded by the IG's office as giving the government much broader powers to punish providers and patients involved with false exaggerated claims.

The law gives the government authority to assess a \$2,000 fine for every false claim or statement submitted, whether or not it was accepted by Medicare or Medicaid for payment. Legislation is before the Senate (S.1780) that would increase the penalty to \$10,000 per count and give the IG added powers.

Under the law, civil penalties may be assessed upon criminal conviction in federal or state courts.

However, the major thrust of the new civil fraud division will be against people who, for one reason or another, are not prosecuted criminally. In this event, the prosecution, investigation and judgment will be handled "in house," within the HHS Department without recourse to the courts. Administrative law judges will hear the cases. The final decisions will be

signed off by the HHS Secretary. The appeal would have to be to the U. S. Court of Appeals.

An HHS official said the department will move with extreme care and caution to ensure that due process is followed in the administrative proceedings.

A 30- to 60-day period will be allowed for comments on the regulations.

announcements

CALENDAR OF MEETINGS

NATIONAL

Sept. 12-15	International Society of Pediatric Neurosurgery—Children's Hospital, Philadelphia
Sept. 13-16	International College of Surgeons—Resorts International, Atlantic City, N.J.
Sept. 20-23	American College of Radiology—Sheraton, Boston
Sept. 24-26	Southern Medical Association Regional Postgraduate Meeting—Marriott Hotel, New Orleans
Sept. 25-Oct. 1	American College of Emergency Physicians—St. Francis Hotel, San Francisco
Sept. 27-Oct. 3	American Group Practice Association—Marriott, Chicago
Sept. 29-Oct. 2	American Neurological Association—Washington Hilton, Washington, D.C.
Sept. 29-Oct. 2	American Society of Human Genetics—Detroit Plaza, Westin, Detroit
Sept. 30-Oct. 3	American Society of Internal Medicine—Palmer House, Chicago
Oct. 4-5	American College of Nutrition—Hyatt Regency, Crystal City, Va.
Oct. 4-7	American Academy of Family Physicians—Fairmont Hotel, San Francisco
Oct. 4-8	American Institute of Ultrasound in Medicine—Currigan Hall & Fairmont Hotel, Denver
Oct. 6-8	Clinical Orthopaedic Society—Hyatt Regency, Milwaukee
Oct. 7-10	American Association for Hand Surgery
Oct. 9-17	International Body Imaging Meeting—Sheraton Royal Waikoloa Hotel, Kona, Hawaii
Oct. 10-13	American Academy of Neurological Surgery—Ritz-Carlton, Boston
Oct. 10-15	American College of Chest Physicians—Sheraton Centre Hotel, Toronto
Oct. 10-15	American Physiological Society—Town & Country, San Diego
Oct. 10-15	American Society of Maxillofacial Surgeons, Sheraton Waikiki, Honolulu

Oct. 10-15	American Society of Plastic and Reconstructive Surgeons—Sheraton Waikiki, Honolulu
Oct. 15-19	International Congress on Tropical Cardiology (in conjunction with the Association of Thoracic and Cardiovascular Surgeons of India)—Bombay, India
Oct. 16-22	College of Pathologists—Hilton Fontainebleau, Miami Beach
Oct. 16-23	American Society of Clinical Pathologists—Las Vegas Hilton
Oct. 17-21	American Academy of Otolaryngology-Head and Neck Surgery—Rivergate, New Orleans
Oct. 17-21	Medical Group Management Association—Hilton, Las Vegas
Oct. 20-23	Association of American Physicians and Surgeons—Colony Square, Atlanta
Oct. 20-24	American Academy of Child Psychiatry—Sheraton, Washington, D.C.
Oct. 21-23	Society for Adolescent Medicine—New York Sheraton Centre, New York City
Oct. 21-24	American Academy of Neurological and Orthopaedic Surgeons—Caesar's Palace Hotel, Las Vegas
Oct. 21-24	American Academy of Psychiatry and the Law—Hotel Roosevelt, New York
Oct. 22-26	American Association of Oral and Maxillofacial Surgeons—Atlanta Hilton Hotel
Oct. 22-26	American Society of Anesthesiologists—Hilton, Las Vegas
Oct. 23-28	American Academy of Pediatrics—New York Hilton, New York City
Oct. 24-27	American Association for Clinical Immunology and Allergy—Town & Country Hotel, San Diego
Oct. 24-30	American College of Gastroenterology—Grant Hyatt, New York City
Oct. 24-31	American Society of Therapeutic Radiologists—Orlando Hyatt House, Orlando
Oct. 25-26	American Society of Law and Medicine—Hyatt Regency Capitol Hill, Washington, D.C.
Oct. 26-30	American Medical Writers Association—Biltmore Hotel, Los Angeles
Oct. 30-Nov. 2	Southern Medical Association—Peachtree Plaza Hotel, Atlanta
Oct. 31	Association for the Advancement of Psychotherapy—Grand Hyatt, New York City
Oct. 31-Nov. 5	American Academy of Ophthalmology—San Francisco
Oct. 31-Nov. 5	American Academy of Physical Medicine and Rehabilitation—Hyatt Regency, Houston
Oct. 31-Nov. 5	American Congress of Rehabilitation Medicine—Hyatt Regency, Houston
STATE	
Oct. 11-12	Tennessee Valley Medical Assembly—Chattanooga Choo Choo
Nov. 2-5	Tennessee Academy of Family Physicians—Gatlinburg

"No matter how many times I hear the statistics concerning doctors in difficulty, I feel the same disheartening wrench to my innards. We lose the equivalent of a medical school class each year to suicide, and the equivalent of three medical school classes are incapacitated by alcohol and drug dependency."

Ralph Crawshaw, M.D.
Federation of State Medical
Boards Bulletin

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard W. Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Administrative Fee:** \$200 per week. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

Sept. 20-24	Internal Medicine Review (40 hours)
Oct. 6-8	Recent Advances in Blood Banking
Oct. 7-10	Annual Frontiers in Nutrition Seminar (10 hours)
Oct. 15	Pain Management Workshop
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions
Oct. 29	Symposium on Leukemia and Lymphomas (7 hours)
Nov. 4-6	American Society for Microbiology Fall Meeting, Scientific Sessions
Nov. 17-19	Tennessee Public Health Association Annual Meeting, Scientific Sessions
Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
Chest Disease	Kermit R. Brown, M.D.
Dermatology	Qamar A. Kahn, M.D.
Gastroenterology	Joseph M. Stinson, M.D.
General Medicine	Paul A. Talley, M.D.
Hematology/Oncology	Edward A. Mays, M.D.
Neurology	Thomas W. Johnson, M.D.
Obstetrics and Gynecology	David Horowitz, M.D.
Ophthalmology	Ludwald O. P. Perry, M.D.
Orthopedics	Buntwal M. Somayaji, M.D.
Pathology	Edward A. Mays, M.D.
Pediatrics	Robert S. Hardy, M.D.
Surgery	Calvin L. Calhoun, Sr., M.D.
General	Gregory Samaras, M.D.
Neurological	Henry W. Foster, M.D.
Thoracic and Cardiovascular	Axel C. Hansen, M.D.
Urology	Wallace T. Dooley, M.D.
	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
	E. Perry Crump, M.D.
	Louis J. Bernard, M.D.
	Charles E. Brown, M.D.
	David B. Todd, M.D.
	Ira D. Thompson, M.D.
	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

- Sept. 23-24 Newborn Conference
Oct. 1-2 Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)
Oct. 29-30 UT College of Medicine Alumni Weekend

Knoxville

- Nov. 6-7 Loss Prevention

World's Fair

- Sept. 2-4 Perinatology for Practitioners (M)
Sept. 9-11 Perspectives in Medical Genetics—1982 (M)
Oct. 13-15 3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology (K)
Oct. 21-23 Office Ultrasound (K)
Oct. 27-30 Cancer Concepts (K)

(K) Contact the Knoxville office for information.

(M) Contact the Memphis office for information.

For further information about any of these courses, please call the appropriate individuals below:

- | | | |
|-------------|-------------------|---------------------|
| Memphis | Ms. Jean Taylor | Tel. (901) 528-5547 |
| Chattanooga | Ms. Jeanne Schmid | Tel. (615) 756-3370 |
| Knoxville | Ms. Kay Laurent | Tel. (615) 971-3345 |

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

EAST TENNESSEE STATE UNIVERSITY

- Nov. 12-14 Cardiology in the Aging
Nov. 16-17 Ellis Orthopaedic Lectureship

For information contact Department of Continuing Medical Education, Box 19660A, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

TENNESSEE ACADEMY OF OTOLARYNGOLOGY AND HEAD AND NECK SURGERY

- Aug. 29-Sept. 1 Otolaryngology Assembly (Annual Tri-State Assembly), in conjunction with the annual meeting of the North Carolina and South Carolina Societies of Otolaryngology and Maxillo-Facial Surgery—Knoxville Hilton, Knoxville. *Fee:* Nonmembers \$200; members and residents \$75. *Credit:* 12 hours AMA Category 1.

For information contact Milton G. Yoder, M.D., 204 Fort Sanders Professional Bldg., 501 20th St., Knoxville, TN 37916.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

- Oct. 31- 13th Family Medicine Review—Session III
Nov. 5

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

INT'L. LIFE SCIENCES INSTITUTE

Symposium on Diet and Hypertension

- Sept. 13-15 Nutrition and Blood Pressure Control (cosponsored by the National Kidney Foundation and the U.S. Department of Health and Human Services)—Stouffer's National Center Hotel, Arlington, Va.

For information contact International Life Sciences Institute, Suite 600, 900 17th St. N.W., Washington, DC 20006, Tel. (202) 659-0074.

UNIVERSITY OF LOUISVILLE

- Sept. 13 Pediatric Oncology: Then and Now (John I. Perlstein Lectureship in Pediatrics)
Nov. 4-5 Infections in the Newborn (16th Annual Newborn Symposium)

For information contact Billy F. Andrews, M.D., Department of Pediatrics, University of Louisville School of Medicine, Louisville, KY 40292, Tel. (502) 588-5753.

OF SPECIAL INTEREST

INT'L. MEDICAL EDUCATION CORP.

- ECG Interpretation and Arrhythmia Management
Oct. 15-16 Sheraton Atlanta
Dec. 3-4 Hilton Plaza Center, Kansas City, Mo.
Oct. 22-23 Hyatt Lincolnwood, Chicago

Ambulatory Electrocardiography: Clinical Applications, Methodology and Interpretation

- Oct. 29-31 Sheraton-Charleston, Charleston, S.C.
Dec. 3-5 Hyatt Regency, Chicago

Clinical Management of Coronary Disease and Dual-Mode Exercise Testing

- Dec. 3-5 Peachtree Plaza, Atlanta

Arrhythmias and Cardiac Ischemia: Diagnosis and Management

- Nov. 5-6 Le Pavillon, New Orleans

Cardiac Rehabilitation

- Nov. 5-6 Hyatt Lincolnwood, Chicago

For information and complete course schedule contact Division of Postgraduate Education, International Medical Education Corporation, 64 Inverness Drive East, Englewood, CO 80112, Tel. (800) 525-8651.

The Program of In Vitro Fertilization At Vanderbilt Medical Center

ANNE COLSTON WENTZ, M.D.

I am delighted to be here to speak with you about an exciting new effort. We did not embark lightly into the controversial area of in vitro fertilization and embryo transfer (IVF/ET). We considered carefully at every step the impact of such a program on the university and medical center, on the community, and also on potential patients. We attempted to anticipate problems and difficulties, both medical and social. We were concerned that Nashville might experience what Norfolk did when the first IVF/ET program was established, but, in developing the program at Vanderbilt University, we have not encountered the negativity that surrounded the first program to become active in this country.

The Center for Fertility and Reproductive Research (C-FARR) is organized to diagnose and treat the infertile couple. For each diagnosis, or reason for infertility, there is a proper therapeutic approach, and the various components of C-FARR all deal with optimizing a couple's chance to have a healthy baby. For certain types of infertility, in vitro fertilization and embryo transfer is the only possible treatment. Therefore, we have felt that if it is ethically and morally acceptable to diagnose and to treat infertility, then in vitro

fertilization and embryo transfer is ethically acceptable as a form of treatment. This is the theme that I will carry through the rest of my remarks.

Dr. Pierre Soupart was the father of the IVF program at Vanderbilt University. As many of you are aware, Dr. Soupart prepared a grant proposal entitled "Cytogenetics of Human Preimplantation Embryos," which was submitted to the National Institutes of Health. This research proposed to study the chromosome complement of the fertilized human oocyte. The reason behind the proposal, the purpose of it, was to demonstrate the anticipated normalcy of the genetic make-up of the early embryo, to serve as a quality control or safety study preliminary to a clinical IVF program. That proposal underwent peer review, and was entirely approved from a scientific standpoint and found to be acceptable for funding by the National Institutes of Health. This did not come to be, and human IVF research came to a standstill when regulations issued in 1975 by the Department of Health, Education, and Welfare determined that such proposals also be reviewed by a National Ethics Advisory Board. Appointments to this committee were not effective until 1977, and by July 1978, only two meetings had been held.

In July 1978, the birth of the first baby by an IVF/ET technique received widespread publicity in England and around the world. Another year passed while the Ethics Advisory Board traveled the country to meet in many cities and hear testimony. At the end of their deliberations, on May

Presented at the Annual Meeting of the Tennessee Medical Association, Medicine & Religion Breakfast, Memphis, April 17, 1982. Sponsored by the Committee on Medicine & Religion of the Tennessee Medical Association.

From the Division of Reproductive Endocrinology, Department of Obstetrics & Gynecology, Vanderbilt Medical Center, Nashville.

Reprint requests to Division of Reproductive Endocrinology, Department of Obstetrics & Gynecology, Vanderbilt Medical Center, Nashville, TN 37232 (Dr. Wentz).

4, 1979, the group reported to the Secretary of Health, Education, and Welfare, and published in the *Federal Register*, their conclusion that such research, with or without embryo transfer, is ethically acceptable. However, there it stopped, as not one of the several subsequent Secretaries of Health, Education, and Welfare (now Health and Human Services [HHS]) continued with the process of funding the grant proposal.

Dr. Soupart died June 10, 1981. He died before the program of in vitro fertilization and embryo transfer became active. Dr. Soupart, however, in 1973 took a photograph of a fertilized human egg at Vanderbilt University. It was not the first human egg fertilized in vitro and not the first human egg fertilized in this country or in the world, but it was a *documented* fertilization. This was Dr. Soupart's work. He showed that fertilization could be done in vitro, and the resulting zygote appeared normal. It was some time, well after I came to Vanderbilt University, that we chose to explore whether the climate might now be right to continue with in vitro fertilization and embryo transfer.

We felt it important to deal with the infertile couple in such a way that the couple's diagnosis was established, the appropriate therapy chosen, and an expectation for future fertility provided. We realized that there were some couples for whom nothing could be done. Artificial insemination by donor is an acceptable alternative to adoption for some couples, but what could we do for the woman with no fallopian tubes? If women have no fallopian tubes, there is simply no place where egg and sperm can meet. But Dr. Soupart ten years ago showed that an egg placed together with sperm in a dish would become fertilized. And therein lies the explanation for our recent efforts: the frustration of being unable by any other means to help a certain group of women. We could help those who didn't ovulate, and those with poor cervical mucus, and those with inadequate hormones, or those with too few or no sperm. But we couldn't do anything for the couple without fallopian tubes. This is a group of people for whom there is no other solution.

Let me give you some idea of what goes into a program designed to result in the transfer of a human embryo back to its mother. The first stage of in vitro fertilization involves pretreatment screening and evaluation. There are medical cri-

teria to be fulfilled: the wife should have no fallopian tubes or tubes damaged beyond repair, and we must have access to the ovaries. The husband should be fertile or have a normal sperm count. Both should obviously be healthy, without medical or emotional problems. Ideally, the wife should be under 35 years of age. Besides the medical screening, we have found it important to screen these couples from both the psychological and the social standpoint. In vitro fertilization and embryo transfer is an arduous process. It is not for the weak of heart and it is not for those who are not fully motivated. We must be exceedingly careful in the pretreatment screening of our couples to make sure that there are no unrealistic expectations of success. As you will see, the results still are poor. We must make sure that our couples do not expect that they are coming to Nashville to get that son or daughter they've always wanted.

The process of in vitro fertilization involves aspirating an egg at exactly the right time. Some 15 years of research, predominantly in England, has shown the importance of obtaining a "ripe" oocyte. Pragmatically, a stimulated cycle is preferable, as the time of ovulation can be controlled to a certain extent. Using various medications, some taken orally and others by injection, we are able to stimulate the development of not one but several follicles. The growth of these follicles is carefully monitored, using hormone measurements, clinical parameters such as cervical mucus, and ultrasound findings. Only when this very intricate part of the procedure is done properly can an egg be recovered that is perfectly mature.

This is more difficult than it seems. With ultrasound, we can follow the change in size of a follicle as it grows. But there is a large variation in the size of the follicle even when ovulation occurs in a normal cycle. As ultrasound has certain limits of reliability, ultrasonography is not a precise science. The levels of hormones we measure also cannot tell us exactly when the egg is ripe. Again, there is biologic variability. Experience with ovulation induction and reproductive endocrinology is a great help, but a lot is unknown. Using all parameters available, and a certain degree of clinical judgment, plus perhaps some luck, we attempt to schedule surgery at precisely the right time. When it is determined that a ripe egg is available, then the patient is scheduled for laparoscopy.

The technique of laparoscopy is considerably

different from that ordinarily used. We have to consider the anesthesia to be administered, as well as the length of time the oocyte will be exposed to carbon dioxide inside the peritoneal cavity. A needle passed through the operating laparoscope is used to puncture the follicle. Routinely we use at least two, and frequently three, puncture sites to immobilize the ovary for follicle aspiration. A television camera is attached to the eyehole of the laparoscope, and hooked to a TV monitor so that the one who is to aspirate can see when the follicle is actually entered. The teamwork involved in the operative part of this process is very close.

A 14-gauge blunt needle with a 45° bevel is forced into a follicle with moderate pressure, and suction is applied with a syringe; when this is accomplished appropriately, the follicle collapses and the fluid continues through the needle and is caught in a trap. Fluid from a ripe follicle is straw-colored, and, it is thought, contains the oocyte in its cumulus floating free within the follicle. Frequently we have been able to identify this structure with just the naked eye because of its surrounding mucus cloud, but only if the follicle was ripe, and the puncture was perfect, and there was no contamination with blood. The trap containing the fluid is taken to the laboratory where Dr. Charles Torbit searches for the egg. If the fluid is clear, the search is likely to be easy, as one can lift the trap to the light and see the floating cumulus mass. Under other circumstances, 50 to 100 ml or more of bloody fluid, follicle washes, and cul-de-sac aspirates must be searched, very like looking for a needle in a haystack.

Once found, the oocyte, or rather the cumulus mass, is graded for its maturity. If the cumulus is not expanded, it indicates that the oocyte was aspirated some hours short of full maturation. Details of the oocyte itself are obscured by the surrounding cumulus. As quickly as possible, the oocyte is put into culture medium and placed in the incubator. Some hours later, fertilization is allowed to occur by placing with the egg a suspension of washed, prepared sperm. The oocyte is then left for about 12 hours undisturbed.

About 40 hours from the time of insemination the fertilized egg should have divided and is usually at the two-cell stage. This will occur only if its growth environment is carefully controlled. Temperature, gas concentration, and pressures in the incubator must be kept within very fine lines. At this time then, all healthy zygotes are loaded into a transfer catheter and gently slipped back

into the mother's uterus. Some care has been taken to assure that the endometrial lining is prepared for implantation, but the technique is blind and the zygote(s) are ejected as close as possible to the top of the uterine cavity.

As you can see, there are many areas and many stages of the process at which a difficulty or problem could occur. For reasons of patient confidentiality, we cannot tell you if pregnancies have occurred. We do know that every step of the process works. We know how to stimulate cycles, to judge egg maturity, to aspirate eggs and how to handle them in culture. We have seen them fertilize and cleave and we have placed them back in their mother's uterus.

The results around the world are striking. In England, there are two active groups, both with pregnancies. Bourne Hall, run by Steptoe and Edwards, who had the first successful delivery, now is treating up to 15 couples a week, and Dr. Steptoe reports his group has over 100 pregnancies. In Australia, Austria, Germany and France, pregnancies have been reported. In this country, two groups have successful ongoing pregnancies, and the Norfolk Clinic has had two deliveries. Sufficient patients have now been successfully treated to allow some statistical evaluation.

Some rather interesting results have been reported from the Norfolk group, headed by Drs. Howard and Georgeanna Jones. For example, of those patients selected as having an ideal stimulation, 41% achieved pregnancy. Another finding was that the number of fertilized eggs transferred made a big difference in the results: when three embryos were transferred, 56% of women became pregnant; when two embryos were transferred, 28% became pregnant, and with a single embryo transfer, only 8% achieved pregnancy. Most of the multiple transfers resulted in pregnancies with a single fetus. A great deal is yet to be learned, but perhaps this gives you an idea of where in vitro fertilization and embryo transfer is going and the results that can be obtained.

When I came to Vanderbilt in late 1980, I spoke with Pierre Soupart; I knew the past history and future potential, the available facilities, and the people and their expertise. At this time, we knew of the pregnancy in Norfolk and that there were pregnancies in Australia and England. But the success of other groups did not necessarily mean for us at Vanderbilt that a program in IVF/ET was necessary, was needed, or was appropriate.

What we did was to embark on a series of logical steps. First we created and established the Center for Fertility and Reproductive Research and chose its Advisory Board. We formed six committees, and put these committees to work. We asked the Legal/Legislative Committee to look at the law, and the Ethics Committee to deliberate. We asked the Community Education Committee to see what the climate might be in Nashville. We asked the Public Affairs Committee to guide us in handling publicity. These committees focused on finding an answer to the question of whether a program of IVF/ET should be developed at Vanderbilt as part of C-FARR.

As a faculty member of an academic institution, I felt it important to consider other aspects of an in vitro fertilization program. Firstly, was there a need in terms of patient care and service? Was there a population that required this procedure, with patients for whom no other solution would be possible? Secondly, what could be learned? Would there be research potential for such a program? Thirdly, what could be taught? Would we gain sufficient knowledge to justify a continuing teaching aspect of the program? Finally, was there a possibility that someone or something might be hurt? What were the concerns? What were the ethical and moral considerations? What were the medical questions? "Do no harm," was one of the guidelines of the earlier conversations and debates.

What did we find when we asked if there were patients who would require in vitro fertilization as the only solution to their problem of infertility? The 1970 census produced some interesting figures. One can play with figures. Creative bookkeeping is something we all know, but, nevertheless, in the 1970 census it was reported that there are some 11 or 12 million married couples between the ages of 14 and 34, and between 35 and 44 an additional 5.9 million. Using these figures, one can make a high estimate that there may be 17 million couples within the reproductive age bracket interested in having a family.

Starting with 17 million couples, how many are infertile? It is well accepted that involuntary infertility affects approximately 15% of the married population, so one can calculate a low and high estimate of the numbers of these couples in the United States.

Approximately 30% of the patients seen for

infertility have problems that are of pelvic or tubal etiology and have a physical or mechanical block to fertility. They may have adhesions, blocked tubes, no tubes, or scarring. Perhaps 50% of these patients at most can be helped by surgery to become pregnant. But the failure rate of an operative approach, even when accomplished with the latest techniques, including lasers and operating microscopes, and the most advanced skills is remarkably high. Perhaps 50% of these couples would be eligible for an in vitro fertilization program.

Across the board, about 40% of couples have infertility due to a male factor. Artificial insemination by a donor is an accepted, widespread, relatively noncontroversial choice. But what if a couple wants to have their own child? Of the 40% with the male factor, perhaps 10% would be interested in in vitro fertilization rather than semi-adoption or artificial insemination by a donor.

Finally, in approximately 5% of couples no diagnosis is found; they are the so-called normal infertile couple. Perhaps these patients might be candidates.

The final tally of eligible couples is surprising and quite remarkable. Using the most conservative estimate, there are at least 324,000 couples within the United States for whom in vitro fertilization might represent the only solution to their problem of infertility. We decided then, that perhaps there was a need.

We next asked ourselves what we might learn. This list goes on and on because of the number of questions and the few answers available. Many will spend the rest of their lives learning from such a program. So little is known about human fertilization, and what happens to chromosomes, and about the biochemical pathways in the oocyte and the developing embryo. We know very little about how the environment affects reproduction. What nutritional and growth factors are necessary for normal development? Only through studies in this area might we be able to determine some of the environmental factors that affect the processes of fertilization, and growth and development of the embryo, usually negatively. We decided that there were many things to be learned.

We then asked about areas of concern. There are areas of both medical and ethical concern. Those that we identified in the medical area include concerns about whether fertilization could occur normally. Is the frequency of multiple

sperm penetration into the oocyte, known as polyspermy, greater in the in vitro setting? What about the possibility of an abnormal sperm fertilizing the oocyte? Would it cleave? Would there be any method to screen for a potential abnormality of the developing embryo? These were all areas that concerned us, because there are as yet no answers, and very little information. We decided that these were serious areas that required careful consideration.

Finally we deliberated upon the ethical concerns. First we listed a number of issues that have been identified one way or another. These objections to IVF/ET have come from several viewpoints. They represent diverse motives, differing sophistication, varying scientific backgrounds, and obvious prejudice. For some there are no answers and perhaps no satisfactory response. We found it difficult to classify and to categorize the various objections, but since many of them have been repetitive, they can be listed and discussed.

The first objection is that IVF/ET to treat infertility is unethical. IVF/ET is but one of many approaches to the treatment of infertility. For each reason found to explain infertility, and these are many, there is a treatment of choice. IVF/ET is the treatment of choice, the only available therapeutic means, for those women without tubes. If it is ethically acceptable to treat infertility at all, then it is ethically acceptable to use in vitro fertilization as the solution for one form of infertility.

The moral status of the early embryo has concerned theologians, philosophers, ethicists, and scientists for many years. What this deals with is the loss of the embryo, before or after transfer, and what is the need to protect the embryo. When do laws applied to protection of the individual come to bear? The difficulty for us has been to reach an answer when the ethicists, the theologians and philosophers cannot agree. A superb discussion of the question was published by Walters in the *Hastings Center Report* (9:23, 1979). As an example of the difficulty, suppose we were to say that protection begins with conception. Is conception the moment when the sperm enters the egg by passing through the zona? Is it conception when polyspermy occurs and multiple sperm enter the egg? Is it conception when the two pronuclei fuse? Is it conception when the first cleavage occurs? What happens if one blastomere does not develop? Is it conception when implantation begins? We cannot answer those questions. Each person perhaps has

his own opinion. We have wrestled with these questions and continue to do so.

In vitro fertilization has been stated to be unnatural and thus objectionable. How does one respond to the objection that in vitro fertilization is against nature, and for this reason should not be performed? What is the job of a physician? Think back on the last five patients that you saw. They came to you because they were sick, had a broken leg, had depression, pneumonia or pain. They came because they needed some operative or medical procedure that would change and improve their future. As physicians, we are all taught to change nature to help a patient. Every request by a patient to a physician is a request to change nature. We did not become physicians to let nature take its course and to have our patients not be benefited by our actions.

The next objection is that IVF programs are creating life. "Creating life" is a serious charge. But, how can an in vitro fertilization and embryo transfer program create life? The egg is alive, the sperm are certainly alive. All that is done in vitro is to put the two together, something that could not happen in vivo. An in vitro fertilization program does not tamper with creating life; we are not disturbing the natural process and we prefer it to occur as naturally as possible. We are not answering questions concerning the mysteries of life. Left for others to explore are answers concerning the purpose of life. Left intact are the mysteries of the genesis of life. The egg is alive, the sperm are alive, and part of a continuum.

Another objection has been that in vitro fertilization involves ethically questionable biomedical research. We think of the program as innovative therapy, and precedent has been set for accepting new therapeutic procedures. Innovative therapy is not only accepted, but expected, as we deal with problems in the face of advancing technology. Informed consent, an explanation of the risk:benefit ratio, and the choice of alternatives are all involved in any procedure involving new approaches to treatment. Given adequacy of consent procedures, patients are free to undergo either within or outside the research context therapeutic procedures that may involve major risks. Through consent procedures we teach our patients about the program and help them to choose whether they want to participate. Full disclosure is important, as only complete knowledge implies complete consent.

Considering the program as innovative thera-

py perhaps begs the question, however. It is unnecessary, because this question has already been considered at great length by the ad hoc Ethics Advisory Board, and in vitro fertilization has been found to be ethically acceptable, whether or not embryo transfer is accomplished. When embryos were to be transferred, the NIH Advisory Board stated that human research was acceptable, that innovative therapy was ethically acceptable, but that one stipulation must be made—the sperm must come from the father, the egg must come from the mother, and the embryo must return to that mother.

In the situation in which embryo transfer was not accomplished, the embryo could remain in culture for no longer than 14 days. These were the conclusions of the Ethics Advisory Board, after a year of deliberations and travel seeking testimony and interviews from a remarkable number of people. We felt that an adequate review had been accomplished, and that in vitro fertilization was considered ethically acceptable.

Another objection has involved a complaint exactly the opposite from that of creating life. It has been suggested that in vitro fertilization is unethical because embryos are destroyed in the process. This involves two situations: loss of embryos after transfer to the uterus, and loss of embryos that are not transferred. Taking the second situation first, loss of an embryo before transfer in the laboratory is regrettable but expected. A number of things can happen: fertilization simply may not occur, or if fertilization appears to occur, cleavage may not. We don't know why these things happen but they happen in nature as well as in the laboratory.

At about four months before her birth, a woman's ovary contained about 8 million eggs. At the time she was born, she had perhaps 600,000 to 800,000. Throughout childhood, follicles containing eggs are constantly undergoing development and atresia, the process of oocyte death. At puberty, the menstrual cycle begins, each cycle involving the initiation of ovulation, or release of a mature oocyte. During her reproductive life, a woman may ovulate perhaps 480 times. By menopause, however, all her eggs have either been extruded, or much more likely, undergone atresia; most eggs never make it to fertilization. Only about 480 of that 8 million were ever given the opportunity to become an em-

bryo.

Mother Nature doesn't do very well, either, by the products of conception. It is difficult to study what happens in the normal cycle because we have no way to assure ourselves how often fertilization occurs. Nevertheless, sensitive pregnancy tests can detect embryologic development and implantation before the missed period, so we can get some idea of the frequency of early pregnancy. In a large number of women studied in England, out of some 623 cycles, 33% of women had only biochemical evidence by a sensitive hormonal test that pregnancy had occurred (Miller et al, *Lancet*, Sept 13, 1980, pp 554-556). About 25% of the women became clinically pregnant, but only 16% had viable pregnancies after eight weeks. The fascinating conclusion drawn is that Mother Nature does not allow the successful implantation of a significant number of embryos, and even among those that do implant, the post-implantation pregnancy loss is 23%. If you recall the pregnancy rates in IVF programs discussed earlier, you will see that most programs are approaching results expected in nature, and at least one program seems to be improving on the natural situation.

One other objection has to do with the product. What are the risks for the conceptus? What are the problems for the embryo, for the unborn child? It has been suggested that the unborn child, the embryo, had no opportunity to give consent. But no one of us here today gave consent to our own conception and embryonic development. There is no consensus as to when conception occurs; no one has been able to define this term. Nor is one able, from a medical, ethical, or philosophic standpoint, to give a definition as to the humanhood of the embryo, its personhood, or its moral status. Until implantation has taken place, there is no unborn child. After implantation has occurred, that developing embryo has no greater and no less a need of protection than any other embryo. Once implantation has occurred, that embryo is on its own, ethically as well as physiologically.

Another objection has been that children born may not be normal, and that there is an increased risk of teratogenesis. This has been termed the "Pandora's Box" argument. But this has not shown up. Animal data indicate that there is no greater risk of abnormalities. The physical appearance and health of children born by a process of in vitro fertilization and embryo transfer has so far been normal.

There are still other areas of objection. In vitro fertilization should be stopped because of what might happen next—surrogate mothers, genetic engineering, cloning. One can't speak for others, and who might go beyond the relatively straightforward guidelines offered by the Ethics Advisory Board. But what we are doing with our IVF program has nothing to do with genetic engineering and surrogate motherhood. The Domino Theory has little relationship to most in vitro fertilization programs. We have not felt that in vitro fertilization is unethical because of what someone else might do in the future. Our own program should be considered only on its own merit.

Another objection to in vitro fertilization states that it violates the sanctity of marriage, that it does not provide a proper intimate environment for conception, and that this intimacy is something private and of the family. Whoever thought that one up has absolutely no appreciation of what the infertile couple goes through.

The infertile couple has undergone tremendous degrees of anguish and stress. Those of you in this room who have families—think of what it would be like not to have those children. Those women in the audience should think about how it is for the barren women to be reminded of her infertility monthly by her menstrual period. The degree of emotional, physical, and monetary sacrifice that these couples go through is incredible.

They have demonstrated far more sacrifice, love, and understanding than a normally fertile couple. These couples have paid their dues, and an in vitro fertilization program does not come between them.

Finally, in vitro fertilization has been suggested as unethical because of the risks of publicity for a child so conceived. On Dec. 28, 1981, a healthy baby girl was born in London. This received worldwide attention. Drs. Howard and Georgeanna Jones were on every morning news show, and many of the talk shows. They did an hour-long documentary show on public television. The parents of this baby were extensively interviewed. *Family Circle*, in April, did their story. How many of you can remember the name of that baby? I would predict that in five years, in vitro fertilization and embryo transfer will be so routine, so commonplace, and so successful that no one will care if fertilization occurred in a dish.

This is what we thought and did to become a team active in in vitro fertilization. I have told you what we discussed and deliberated, our concerns and some of the larger issues with which we have wrestled. Our team is a large one; its members represent a diversity of opinions, of attitudes, of background, and of religious persuasion. Overall, there is one thing on which we all agree: we believe in the right to life, the right to have a child, and the right to help others have that child.

APRIL 1983						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NOTES					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
TMA 148TH ANNUAL MEETING Opryland Hotel—Nashville						
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Bacteremic Group G Streptococcal Septic Arthritis

HUMBERTO COTO, M.D.; KATHLEEN GAGE, M.D.; OKECHUKWU EKENNA, M.D.;
and STEVEN L. BERK, M.D.

Introduction

While Lancefield group G streptococci are known to cause serious infections,¹ particularly in association with malignancies,² very few cases of septic arthritis have been described.^{1,3-5} We report here the clinical and laboratory features of an unusual case of migratory polyarthritis, caused by a group G streptococcus, in an individual with cancer of the larynx.

Report of a Case

A 62-year-old white man, a chronic alcoholic with rheumatoid arthritis for more than 30 years, was found to have a squamous cell carcinoma of the larynx in 1974, metastatic to the clavicle. He underwent a laryngectomy and a radical neck dissection followed by radiation therapy to the right clavicle. In 1975 a left shoulder and right elbow prosthesis were implanted because of severe rheumatoid arthritis.

In December of 1981, the patient was admitted to the Veterans Administration Medical Center, Mountain Home, Tenn., complaining of malaise, fever, and a swollen left knee for one week. There was no history of recent trauma. On examination the patient appeared acutely ill, with a temperature of 101°F rectally, pulse 100/min, blood pressure 100/60 mm Hg, and respirations 20/min. There was a small pressure ulcer on the extensor surface of the 4th right toe. The patient was edentulous and there was a purulent exudate in his tracheostomy. Multiple joint deformities were present. The left knee was tender, swollen and warm.

Laboratory studies showed a peripheral WBC count of 3,900/cu mm with 47% neutrophils, 38% bands, and 15% lymphocytes. The hemoglobin was 11.7 gm/dl and the hematocrit was 33%. Initial ASO titers were 633 Todd units. A left knee arthrocentesis yielded 80 ml of purulent fluid. The synovial fluid white cell count was 105,200/cu mm with 98% neutrophils and 2% monocytes. The joint fluid glucose was 4 mg/dl. A Gram stain of the synovial fluid aspirate disclosed abundant Gram-positive cocci in chains. Antibiotic therapy was started with intravenous erythromycin, since the patient was allergic to penicillin. During the following days, the patient developed migratory polyarthritis affecting the left knee,

the metacarpophalangeal joints bilaterally, and left elbow and right shoulder.

Synovial fluid cultures from three joints and blood cultures were all positive for a β -hemolytic non-group A, B, D streptococci. Lancefield serotyping was performed on the isolates by the Tennessee State Public Health Laboratory, and all isolates were found to be group G.

Minimum inhibitory concentrations were obtained for several antibiotics (Table 1). Since there was a relative resistance in vitro to erythromycin, this antibiotic was discontinued and intravenous vancomycin was begun and continued for six weeks. The synovial fluid aspirates became sterile 24 hours after the vancomycin was started. Schlichter tests performed on blood and synovial fluid were adequate (Table 2). On the third day an ASO titer was 1200, and thereafter it declined as the patient improved. The patient recovered without sequelae.

TABLE 1
MINIMUM INHIBITORY CONCENTRATIONS*

Penicillin	<0.06	μ g/ml
Methicillin	2.0	
Ampicillin	0.25	
Cephalothin	0.5	
Erythromycin	2.0	
Chloramphenicol	<0.25	
Vancomycin	<0.25	

*Gibco Sensi-titer plate.

TABLE 2
SCHLICHTER TEST (VANCOMYCIN)

	Through	Peak
Serum	>1:128	>1:128
Synovial Fluid*	>1:128	>1:128

*Shoulder and knee.

From the Division of Infectious Disease, Quillen-Dishner College of Medicine, and the Department of Medicine, Veterans Administration Medical Center, Johnson City, Tenn.

Reprint requests to Department of Medicine, Veterans Administration Medical Center, Johnson City, TN 37684 (Dr. Berk).

Review of the Literature

Five cases with clinical evidence of septic arthritis and positive blood cultures or synovial fluid cultures for group G streptococci have been reported (Table 3). Another case of acute septic arthritis caused by group G streptococci was recently described by Ho et al,⁶ but no clinical data were provided.

Underlying illnesses in four patients included rheumatic heart disease with an infected prosthetic mitral valve and bacterial endocarditis, rheumatoid arthritis, chronic alcoholism, and cancer of the larynx. Although the patient described by Duma et al¹ had infective endocarditis, it is felt that some clinical and laboratory findings of this case were typical of bacterial septic arthritis.

The ages of the five patients ranged from 7 to 67 years. Four were male (age range 7-67), and one was female (age 24). Two patients had rheumatoid arthritis and two were alcoholics. No underlying condition was found in one patient. The interval between the onset of symptoms and the beginning of antibiotic therapy ranged from one to seven days. Underlying illnesses and clinical findings were not reported in one case. Two patients had monoarticular arthritis and two had a

migratory polyarthritis. The probable port of entry was established with certainty in only one case.¹ Possible ports of entry in other cases included the skin in three cases, and the oropharynx in one. Similar sites of entry in other types of group G streptococcal infections have been previously described.^{1,2} The diagnosis of septic arthritis was made promptly in all patients after joint aspiration was done.

A Gram stain of aspirated synovial fluid performed in three cases consistently disclosed Gram-positive cocci. Synovial fluid leukocytosis with a predominance of neutrophils was uniformly present. Blood cultures were positive in three individuals, two of whom had negative joint fluid cultures; one had been receiving antibiotic therapy for several days before the aspiration was done. In two other cases with negative blood cultures the joint fluid cultures grew group G streptococci. Finally, blood and synovial fluid cultures were positive simultaneously only in the case reported here. Antistreptolysin O titers were positive in three individuals, and they correlated well with the course of the disease.

The majority of patients were treated with high dose intravenous penicillin from four to six weeks, and none died during therapy. Intravenous vancomycin was used in our case, since the patient

TABLE 3
REVIEW OF CASES OF SEPTIC ARTHRITIS CAUSED BY GROUP G STREPTOCOCCUS

Source	Age/Sex	Probable Port of Entry	Underlying Illnesses	Clinical Findings	Joints Affected	Organism Isolated		ASO Titers (Todd)	Gram Stain of Joint Fluid	Treatment/Outcome
						Blood	Joints			
Duma et al ¹	24-F	Genitourinary tract	Rheumatic heart disease, infected prosthetic mitral valve	Fever, vomiting, diarrhea, malaise, migratory joint pains, generalized petechial eruption	Shoulders	+	-	625	Not done	Penicillin good
Russell et al ³	63-M	Unknown; probable necrotic lesion in the back	Rheumatoid arthritis	Unknown	Unknown	+	-	?	Gram (+) cocci	Unknown good
Tuazon ⁴	7-M	Unknown	None	Spontaneous swelling and pain of right ankle, fever	Right ankle	-	+	680	Not done	Penicillin good
Fujita et al ⁵	67-M	Probably skin	Chronic alcoholism	Swelling of the left knee, diaphoresis	Left knee	-	+	?	Gram (+) cocci in chains	Penicillin good
Present Study	63-M	Nasopharynx, skin?	Cancer of larynx, rheumatoid arthritis, chronic alcoholism	Migratory polyarthritis, fever, malaise	Knees, shoulders, MCP joints	+	+	633	Gram (+) cocci in chains	Vancomycin good

gave a history of allergy to penicillin; the organism was relatively resistant in vitro to erythromycin.

The majority of the patients underwent frequent aspirations of the joints affected, and the fluid became sterile after the first few days of treatment. Finally, one individual required an open drainage of the affected knee. All cases apparently recovered without significant sequelae.

Discussion

Lancefield group G streptococci are known to cause serious disease in man.¹ Infections attributed to this organism include infective endocarditis,¹ pneumonia with bacteremia,⁷ puerperal sepsis,^{8,9} empyema,¹ peritonitis,¹ and septic arthritis.^{1,3-5} Group G streptococci can also cause neonatal sepsis, especially in prolonged rupture of the membranes and in premature babies.¹⁰ Furthermore, group G streptococci seem to cause severe infection in patients with malignancies, or those who are immunosuppressed.² These organisms have been frequently found in ulcers or wounds in patients receiving radiotherapy.² In a series of streptococcus G infections² it was found that tumors of the head and neck that were being

radiated were frequently colonized with group G streptococci, causing chronic infection. In contrast, there are very few cases reported implicating streptococcus group G in acute septic arthritis.

Successful management is possible with high dose intravenous penicillin and frequent synovial fluid aspirations. Open drainage is occasionally indicated. Lancefield typing of all β -hemolytic streptococci may be indicated in order to determine the frequency of group G infection in bacterial septic arthritis and other hemolytic streptococcal infections.

REFERENCES

1. Duma RJ, Weinberg AN, Medrek TF, et al: Streptococcal infections. A bacteriological clinical study of streptococcal bacteremia. *Medicine* 48:87-127, 1969.
2. Armstrong D, Blevins A, Louria DB, et al: Group B, C and G streptococcal infections in a cancer hospital. *Ann NY Acad Sci* 174:511-522, 1970.
3. Russell AS, Ansell BM: Septic arthritis. *Ann Rheum Dis* 31:40-44, 1972.
4. Tuazon C: Case report—Group G streptococcus. *Am J Med Sci* 279:121-128, 1980.
5. Fujita NK, Lam K, Bayer AS: Septic arthritis due to group G streptococcus. *JAMA* 247:812-813, 1982.
6. Ho G, Su EY: Therapy for septic arthritis. *JAMA* 247:797-800, 1982.
7. Vracin W, Gage K, Ortega G, et al: Bacteremic group G streptococcal pneumonia. Submitted for publication.
8. Baker CJ: Unusual occurrence of neonatal septicemia due to group G streptococcus. *Pediatrics* 53:568-570, 1974.
9. Bryans YW: Group G streptococcal sepsis. *Pediatrics* 55:745-746, 1975.
10. Ancona RJ, Thompson TR, Ferrieri P: Group G streptococcal pneumonia and sepsis in a newborn infant. *J Clin Micro* 10:758-759, 1979.

YOUR JOB IS MEDICINE

However, there is a business side to the practice of medicine.

OUR JOB IS . . .

business consulting and financial management specifically for physicians. A principal of our firm is married to a physician.

Our services include ideas or methods regarding:

Office Sharing & Expenses
Pension/Profit Sharing Plans
Tax Alternatives
Accounts Receivable
Renting vs. Building

Pros & Cons of a P.C.
Practice-building Techniques
Offer To a New Physician
Sale of a Practice

Nashville
2120 Crestmoor Road
Nashville, TN 37215
(615) 383-3289



Memphis
5100 Poplar Ave. Suite 2812
Memphis, TN 38137
(901) 685-8305

Initial Consultation at No Charge

the Consulting Group

Daytime and Evening Hours

Preventive Cardiology: The Physician's Role in Risk Factor Reduction

CHARLES E. KOSSMANN, M.D., Editor

S. EDWARDS DISMUKE, M.D.
(Asst. Professor, General Internal Medicine)

The patient, seen for the first time about two years earlier, was a 56-year-old white male dentist who came for a pre-insurance examination. He was asymptomatic. His blood pressure had been elevated for a number of years, but was not treated. His father had a myocardial infarction at 56 years of age, and died in his 60s of a subsequent infarction. The patient smoked one pack of cigarettes per day for about 40 years. Although standardized testing was not done, he appeared to be a type A individual. Several of his associates had died recently of myocardial infarction.

On the first examination his blood pressure was 150/110 mm Hg. He was definitely overweight; although 6 ft tall, his weight was 217 lb. The only other significant finding was mild hypertensive retinopathy.

Laboratory data on the same initial examination revealed a serum cholesterol of 305 mg/dl, a high density lipoprotein (HDL) of 45 mg/dl (normal 45-50 mg/dl in men, 55-65 mg/dl in women), a normal electrocardiogram, and several other normal laboratory tests. A health risk appraisal was made.

The Health Risk Appraisal

One new component of the modern physical examination, included to emphasize risk reduction, is the acquisition of accurate details for determining the patient's risk for various diseases. This component, which can be done in an office practice, is called a health risk appraisal. The health risk appraisal was originally developed by Eugene Robbins in the 1960s.¹ Computational accuracy has been greatly refined, and multiple commercial groups now distribute forms for health risk appraisals. The Center for Disease Control in Atlanta also has a program² that has been made available to health care groups at a nominal fee.

The program printout contains the 12 leading causes of death according to age, race, and sex. For the patient presented, only the data for cardiovascular disease are shown (Fig. 1). It can be seen that this man had five times the risk of such disease as compared to the average individual of his age, race, and sex. The lower case letters in the "bar graph" portion of the figure represent contributing risk factors in his case, which include overweight (W), sedentary life-style and lack of exercise (E), elevated blood pressure (B), smoking (S), and elevated cholesterol (C). The letter X represents unalterable risk for disease. The taller and wider the bar in the printout, the greater the risk.

Another risk appraisal device³ sometimes used in the physician's office is a special slide rule (Fig. 2) that calculates a patient's cardiovascular risk based on age, use of cigarettes, diastolic blood pressure, and serum cholesterol. It is a handy instrument because you can show the patient a fairly accurate population estimate for future disease and death. In this particular man the chance of a heart attack over the next five years was predicted as being 23%. The slide rule also serves as a psychologically motivating device in that you can sit down before the patient and say, "Well, look at this. If you were to lower your diastolic blood pressure, stop smoking, and lower your serum cholesterol, this is how much you could improve your health and longevity."

At the end of the risk factor appraisal, a general sort of recommendation is given. Most of the recommendations consist of common sense suggestions of what an individual can do to reduce his risk. Specific behavioral techniques can then be discussed in order to help the patient alter the risk factors for disease.

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.
Presented Feb. 17, 1982.

TOTAL REDUCIBLE RISK:

14 YRS

CHRONOLOGIC AGE 56
APPRAISAL AGE 75
ACHIEVABLE AGE 61

CAUSE OF DEATH

CHANCES OF DYING PER 100,000

RISK TO PATIENT ("AVG" IS AVERAGE RISK)

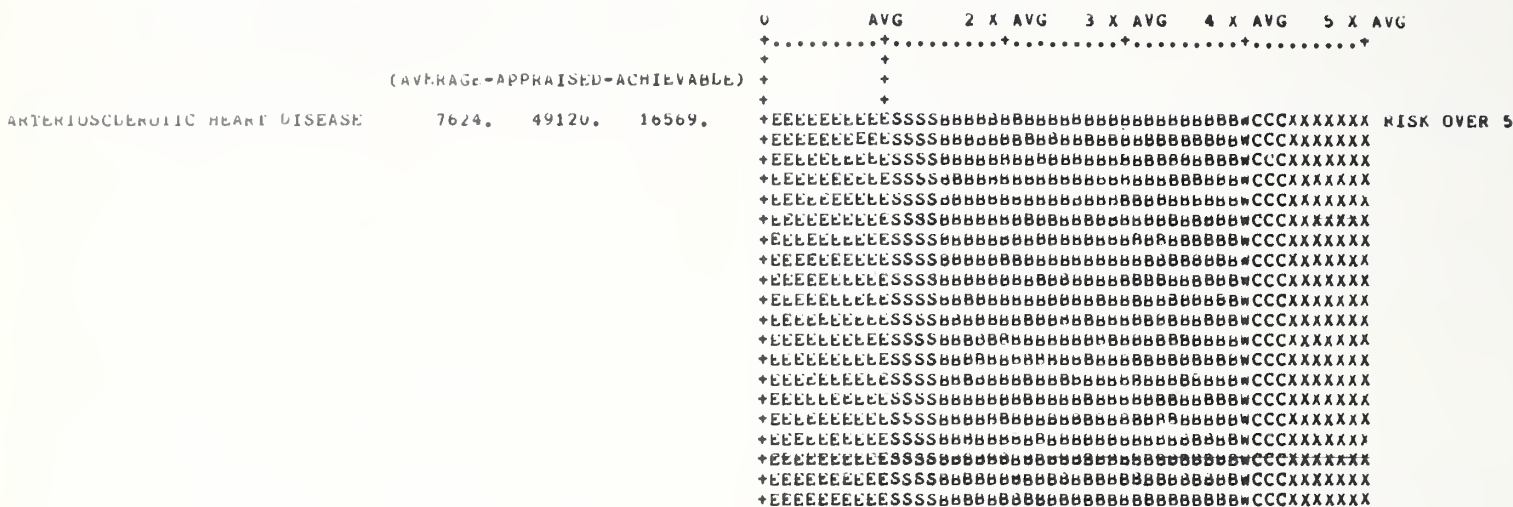


Figure 1. Computer printout of the health risk appraisal of patient shows his reducible risk to be 14 years; a chronologic age of 56 years, an appraised age of 75 years, and an age of 61 years achievable by instituting the necessary corrections in life-style. The chances per 100,000 of dying from atherosclerotic heart disease are shown on the middle left. The bar graft is constructed of letters representing risk factors (see text). The wider and taller the bar, the greater the risk, in this case five times above average.

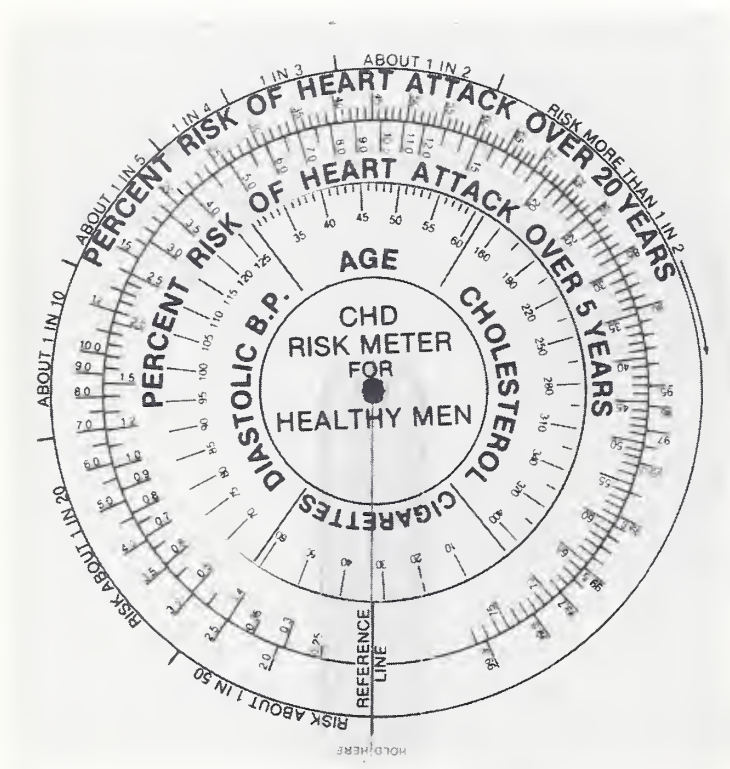


Figure 2. Slide rule for calculating risk of coronary heart disease from age, serum cholesterol, number of cigarettes smoked, and diastolic blood pressure (from Thorsen et al³).

Behavioral Techniques in Risk Factor Reduction

Much work has been done recently to create a number of behavioral techniques for helping people alter their life-style to reduce the risk of future disease. Those used in this particular patient (Table 1) are the ones used in the Multiple

Risk Factor Intervention Trial (MRFIT).⁴ "Self-monitoring" refers to encouraging the patient to look in detail at his habits such as recording what and when he eats, the nature of the dining circumstances, and the like—which allows the examiner and the patient to understand better what some of the eating faults may be. The same type of self-monitoring can be applied to cigarette smoking.

The subject is also encouraged to "set goals" for risk factor reduction. Some physicians and health counselors actually draw up a written "contract" stating exactly what behavior will be changed. A completion date may be specified.

"Provision of basic information" is obvious; it includes hints on how to alter life-styles. Frequent "feedback" is important, and I find that when you are trying to reduce someone's serum cholesterol, for instance, it is highly motivational to check the cholesterol in a short period of time after changing the diet. Psychological "support and positive reinforcement" are obviously important, not only from the physician but also from the spouse and family. In this patient, I also outlined problems and corrective measures to his wife.

Some other techniques that I did not use are frequently provided by non-physician professionals such as health educators, nutritionists, psychologists, or exercise physiologists. Some of

TABLE 1**BEHAVIORAL TECHNIQUES FOR
CARDIOVASCULAR RISK FACTOR REDUCTION**

Self-Monitoring
with detailed analysis
Goal Setting and Contracting
Provision of Basic Information
Frequent Feedback
Support and Positive Reinforcement
Spouse/Family Support

TABLE 2**ADDITIONAL BEHAVIORAL TECHNIQUES FOR
CARDIOVASCULAR RISK FACTOR REDUCTION**

Self-Reward System
Stimulus Control of Environment
Modeling of Correct Behavior
Guided Participation
Self-Presented Consequences and Cognitive Strategies
Systematic Desensitization and Relaxation

these techniques may include the following (Table 2): A "self-reward system" could be any number of enticing rewards. "Stimulus control of environment" refers to control of the individual's environment to enhance achievement of a desired result, e.g., requesting family member not to smoke in the presence of the patient if he is a smoker. "Modeling of correct behavior" by the physician as well as other persons involved is important in the patient's therapy. Obviously a physician who is overweight and smoking is not very convincing when he tells a patient to lose weight and stop smoking. "Guided participation" is a technique used in the MRFIT trial—patients actually go through some of the techniques of changing behavior and practice them. "Self-presented consequences" give the patient some idea of what sort of problems he is going to encounter in everyday life when he tries to adopt new modes of behavior. Participants prac-

tice responses to unhealthy temptations in group surroundings where there is a lot of mutual emotional support. Psychologists can do even more by means of so-called systematic desensitization and relaxation techniques.

In the patient presented, we were able to achieve some of the desired objectives with these methods at the end of one year. His weight was lowered to 187 lb, and his blood pressure reduced to 130/80 mm Hg with the help of medication. He was able to decrease his intake of sodium to the point where 24-hour urine sodium declined from about 240 mEq/24 hr to 90 mEq/24 hr. Medications unfortunately often raise serum cholesterol values somewhat but surprisingly this patient's cholesterol fell more than 30%, down to 188 mg/dl, and the HDL went up significantly.

He exercises regularly now and feels very good about his accomplishments. This is one of the most rewarding types of patient I see. I have gotten discouraged in years past seeing so many people with end-stage disease where so little could be done. By contrast, I have become very excited about a person like this who comes to me with obvious and correctable high risk for serious illness but where I can play some role in lowering the chances of irreversible disease.

It is interesting that our patient's repeat risk appraisal after he improved his health habits was more favorable than the computer program had estimated. In fact, it showed that his risk of death was the same as that of a man of 51 years rather than of 75 years as on the initial appraisal. The probability of heart disease, instead of being statistically more than five times greater than average, was below average. When serum cholesterol is reduced in a year's time it is probable that little has been done to reverse the effects that elevated levels have produced for possibly 20 or 30 years before; the health risk appraisal overestimates the degree of success. But, in smoking, for instance, we know that the risk of cardiovascular disease decreases to the risk of a nonsmoker within about a year after cessation. Thus, although the risk factor appraisal is idealized and exaggerated it is a reasonable approximation.

Risk appraisal is motivating and, I think, a technique that is ethically feasible for physicians to use. The slide rule shows in this patient that his risk of death from heart disease, or risk of having a heart attack in five years, dropped from 23% to 1.5%; this prediction is motivating in itself.

The Periodic Health Examination

One of the reasons I was interested in having the opportunity to talk about this material on Grand Rounds was some published data that distressed me. There have been two recent studies on the periodic health or preventive examination. One of them is a Canadian study done by some very excellent people.⁵ It consists of a detailed review of the literature on things worth doing on the periodic preventive examination, and although the role that the physician can play in reducing cigarette smoking and in counseling for marital discord are mentioned, it says nothing of the physician's role in nutrition or exercise counseling. Although admittedly there is much that is not known about the value of exercise and diet, it seems to me that the evidence for their use in promoting health is very strong, and certainly a physician can do as much in these areas as in marital counseling. Also, many of you have seen an article in the *Annals of Internal Medicine* about the periodic health examination entitled "A Guide for Designing Individualized Health Care in the Asymptomatic Patient."⁶ The results of four large studies are summarized; the only special examinations mentioned are some laboratory tests and the pelvic and rectal examinations. Again, the physician's role in nutrition or exercise counseling is not mentioned; half a sentence

is devoted to cessation of smoking. From my perspective, a physician can do more to reduce the risks that we have discussed today than he can about the items mentioned in that "Guide."

The Value of Risk Reduction

I want to review briefly some of the evidence that relates to the benefit of modifying risk factors. Most of this is now well known but still bears repeating. The complications of uncontrolled high blood pressure have been well substantiated in the Hypertension Detection and Follow-Up Program,⁷ and the Australian Hypertension Study.⁸ These two studies confirm the value of drug therapy in controlling hypertension, but the value of weight loss and reduction of sodium in the diet must not be forgotten. In many individuals weight loss or restricted intake of sodium have reduced blood pressure significantly.

The importance of discontinuation of smoking is obvious to everyone. It is more the magnitude of the evidence in the various studies performed to date than in controlled clinical trials that substantiate the value of reducing this particular risk factor.

A few comments are in order on the evidence for the hazards of high serum cholesterol. Normal limits, ordinarily provided with standard laboratory reports, state that any cholesterol within a range of 180 to 300 mg/dl is "normal." These values are determined from pooled data from major epidemiological studies. However, within the "normal range" there are wide variations in risk. The likelihood of future heart disease varies four- to five-fold among persons with serum cholesterol between the lower and upper "normal" extremes.⁹ Once the serum cholesterol gets over 220 mg/dl, the risk of cardiovascular disease starts to rise sharply. Any patient with a serum cholesterol persistently above 220 mg/dl is under suspicion for future vascular disease.

One of the epidemiological studies I frequently refer to is Ancel Keys' Seven Countries Study¹⁰ that basically relates the intake of saturated fat (left column, Table 3) to serum cholesterol levels and to the death rate from atherosclerotic coronary heart disease. In general, as saturated fat in the diet is reduced, serum cholesterol and death rates go down. The exception is on the island of Crete where the populace has a high intake of polyunsaturated fats, ordinarily associated with a low serum cholesterol.

I want to point out another generally unknown relationship between serum cholesterol on

TABLE 3

SEVEN COUNTRIES STUDY*
DIET, TOTAL SERUM CHOLESTEROL, AND 10-YEAR CHD
INCIDENCE IN MEN 40-59

Population	Saturated fat %	Total cholesterol centile, mg/100 ml			Rates/10,000/10 yr		
		5	50	95	CHD deaths	Any CHD	All deaths
E. Finland	22	182	265	356	681	2868	1511
W. Finland	19	184	253	338	251	1582	1270
US Railway	18	173	236	318	416	—	861
Holland	19	169	230	317	317	1066	1134
Crete	8	151	206	279	0	210	627
S. Italy	9	150	198	274	125	966	1007
Corfu	7	141	198	283	149	686	847
W. Yugoslavia	9	128	186	259	74	629	775
T. Japan	3	106	171	304	71	354	1052
Serbia	9	115	156	217	71	452	1136
U. Japan	3	96	141	194	50	458	1349

*From Keys.¹⁰

the one hand and dietary content of saturated fat, polyunsaturated fat, and cholesterol on the other. Saturated fats are clearly the most significant dietary factor in raising the serum cholesterol, quantitatively by a factor of 2 per unit weight. Comparable amounts of polyunsaturated fats lower serum cholesterol by a factor of 1. Dietary cholesterol only raises serum cholesterol by the function of the square root; perhaps the egg has been given unfair negative publicity. These generalizations are not always predictive in individuals but hold true for groups, and have been reproduced in many controlled laboratory situations.¹¹

The only other risk factor I want to mention briefly is type A behavior, since this patient was thus categorized. There has really been only one prospective epidemiological study of the type A behavior and coronary heart disease, the Western Collaborative Study,¹² with a patient follow-up of 8.5 years. Type A behavior was determined by personal interview rather than from a form filled out by the patient. The type A person is excessively time-oriented. There were two questions in the interview that I found very interesting. The questioner would hesitatingly begin a question, the end of which and the answer to which were obvious. He would measure the time it took the subject to interrupt the questioner and give the answer. The typical type A personality jumps in and finishes the question before it can be completed. In the test an attempt was also made to determine whether or not the subject tries to win games when he plays with his children. Type A people, of course, always try to win.

Clinical Trials to Reduce Coronary Heart Disease Through Risk Factor Reduction

Some of the major trials that have been carried out on risk factor reduction, primarily testing the diet-heart hypothesis, are listed in Table 4. Basically the first four were carried out in the 1950s; the first two were noncontrolled studies and showed a reduction in cardiovascular events but no decrease in total mortality.^{13,14} The Veterans Administration Hospital Trial¹⁵ and the Finnish Mental Hospital Study¹⁶ were primarily diet studies; they also did not show a decrease in total mortality but did show a significant decrease in cardiovascular events. These studies led to a plan for a National Diet-Heart Study¹⁷ that was basically a feasibility study to see if a trial could be carried out to test the diet-heart hy-

TABLE 4
PRIMARY PREVENTION OF ATHEROSCLEROTIC CORONARY HEART DISEASE: MAJOR CLINICAL TRIALS

New York Anti-Coronary Club Trial	Diet
Chicago Coronary Prevention Evaluation Program	Multiple Risk Factors
Los Angeles Veterans Administration Study	Diet
Finnish Mental Hospital Study	Diet
National Diet-Heart Study	Diet-Feasibility Study
Oslo Heart Study	Diet Smoking
MRFIT	Diet Smoking/BP

pothesis. It was concluded that it would take a sample of 60,000 to 120,000 people to test the hypothesis adequately. Since people usually will not comply with a diet for a long period of time, the recommendation was made not to carry out the study. The recently reported Oslo Heart Study¹⁸ looked at men, age 40 to 49 years, who were smokers and had high serum cholesterol but normal blood pressures. They were advised by a physician in just a couple of sessions to reduce smoking and change their diet. These men were followed for four to six years. No decrease in total mortality was seen but there was a significant decrease in the occurrence of coronary heart disease. Finally, the MRFIT trial¹⁹ is of great interest to us; it ends in March 1982 and the results should be available in September 1982. Some results on risk factor reduction have already been published, and are discussed below.

One reason that physicians have been reluctant to be involved in risk factor appraisal and reduction is that they have not been very successful at it. There are new data appearing that show that physicians can be highly successful in such efforts. Recently there was a study on cessation of smoking among patients of practitioners in England.²⁰ All that was done was to have one group of patients to whom the practitioner said nothing about smoking; to another group it was mentioned and the suggestion made that smoking be stopped. To the third group not only was the need for cessation emphasized but patients in the group were also given some simple literature on the importance of the discontinuation of smoking. Although the percentages of change in the habit were small there was a large enough number of patients in the trial to lend

significance to differences among the three groups. Hardly anybody stopped smoking in the group where there was no intervention; 2% to 3% stopped when the physician only mentioned it; and over 5% stopped when the physician condemned it and gave out informative booklets. Although that may not seem like a lot, when you consider that several thousand patients were involved, 5% represents a fairly large absolute number.

In the Oslo Heart Study¹⁸ intervention on the part of physicians was fairly minimal. They did have the aid of a dietitian and there was a 30-minute group session with the wives of the men in the trial. Despite the fact that it was a very inexpensive way to modify risk factors, they had an overall 10% to 15% reduction in serum cholesterol, and cigarette smoking was decreased by 45%.

MRFIT: The Impact of the Intervention on Risk Factors

I want to run through some of the preliminary findings on risk factor reduction. Table 5¹⁹ shows the national trend towards consumption of less fat and more polyunsaturated fats. In the National Diet-Heart Study,¹⁴ fat made up 40% of the dietary calories. In the 1970 Framingham data,¹⁶ the fat content of the diet was decreased further, and finally, at baseline for the MRFIT study, fat content was lower still. The polyunsaturated to saturated fat ratio had also gone up.

Table 6 illustrates changes in various lipoproteins after four years of intervention in the MRFIT trial. All of the lipoprotein reductions were significant except the change in HDL. Unfortunately the experiment was confounded because the control population was simultaneously reducing its risk factors. The MRFIT trial, therefore, did not attain the anticipated results and the cholesterol reduction was not as great as expected.

In the area of blood pressure the special intervention group did significantly better than the usual care group, but the latter group still did relatively well.

Results were much better in the area of smoking. Forty-six percent of the intervention cohort stopped smoking over the four years of the study. The successes were much higher in people who smoked less than a package of cigarettes per day—about 70% of those stopped—as compared to 40% to 50% of those who smoked one to two packs per day, and 30% to 35% of those who

smoked more than two packs per day. Again, the usual care group had high rates of discontinuation of smoking that complicated the trial but the differences were still highly significant and were at least as good as predicted. Because the team operating the trial was not attaining the differences that they had hoped for, new intervention techniques to further reduce serum cholesterol, blood pressure and smoking were added in the last couple of years of the trial. As results stand at the end of four years, the predicted goals for differences in risk factor reduction between the experimental and the control groups have not been achieved. To attain significant statistical mortality differences at the end of the six-year trial, greater reduction in the measured risk factors must be achieved. We will see in September 1982 how successful the MRFIT trial actually was.

Risk Control: Function of Physician or Public Health Agency?

I want to remind you that the rare hyperlipidemias that we talk about frequently on the wards are uncommon in the general population.²¹ They are certainly important but rare when you consider the kinds of patients dying most often from heart disease. Most people who develop atherosclerotic heart disease come from the group that have serum cholesterols between 200 and 300 mg/

TABLE 5
HABITUAL NUTRIENT INTAKE REPORTED BY MIDDLE-AGED AMERICAN MEN AT THREE DIFFERENT TIMES*

	National Diet-Heart Study ^a (baseline)	Framingham Study ^b	MRFIT (baseline)
Years(s)	1963	1967-1970	1974-1976
Number of men	1,196	864	12,847 ^c
Calories	2,565	2,608	2,488
Cholesterol (mg/day)	533	530	451
Total fat			
(% of calories)	40.4	39.0	38.3
Saturated fat			
(% of calories)	15.6	15.0	14.0
Polyunsaturated fat			
(% of calories)	3.9	5.4	6.4
P/S ratio	0.25	0.36	0.46

^a *Circulation* 37 (suppl): 1-428, 1968.
^b *Amer. J. Clin Nutr.* 30:2092-2100, 1977.
^c The 12,847 men reported here are the sample of MRFIT participants for whom dietary recall data was available (99.85% of the entire cohort of 12,866).
* From Caggiula et al.¹⁹

dl. Based on the Framingham equations (personal communication with W. Kannel, M.D. based on data for men age 35-57 years), the *population* reduction of serum cholesterol of only 5 mg/dl can reduce the incidence of coronary heart disease by 4.3%; a reduction of 2 mm Hg in diastolic blood pressure of an entire population can reduce cardiovascular disease by 8%; a reduction of smokers by 20% will reduce cardiovascular disease by 10%; all three of these minimal reductions can reduce cardiovascular disease by almost 22%.

An argument against risk factor reduction that is frequently used is as follows: If you assume that you can get a 10% reduction in serum cholesterol over a 40-year period in a group of men, the reduction of deaths will be only about 1 in 50. Some persons will question the desirability of subjecting 49 people to a changed diet for 40 years just to save one from heart disease. On the other hand, when you are using vaccines or doing rectal examinations or all the other preventive measures that physicians do, the risk/benefit ratio is probably much less favorable. With vaccines, you have to vaccinate well over 500 people to save one person from an infectious disease; thousands of the highway-traveling public must wear seat belts all their lives to avoid one crash death. I think that it is true that risk avoidance is a public health problem, and our first approach probably should be on a public health basis. There are many trials being carried out now to test this hypothesis. The Stanford three-community study²² is one trial that has been completed, as is the North Karelia project in Finland.²³ There are three very large trials going on now at Stanford, Minnesota, and Pawtucket, R.I. Nonetheless, I think individual physicians have an important role to play in risk factor reduction as

long as this doesn't greatly increase the cost of medical care. The MRFIT trial¹⁹ is the most expensive clinical trial that has ever been carried out in this country, costing \$120 million. It may not be cost-effective to set up teams of dietitians, exercise physiologists, and behavioral scientists to intervene intensively in individual habits and customs. Advertisement and social change in general are probably the most cost-effective ways. But I think there is room for both approaches.

Some Observations on Medical Students

You might be interested in some statistics I have collected on medical students. First of all I tried to find out whether medical students felt that they were susceptible to heart disease. I asked that very question, and then I listed four diseases to find out how susceptible they thought they were to each. Their answers were fairly reasonable but they felt most susceptible to heart disease which probably is statistically correct. Both first-year and fourth-year medical students responded similarly. Then, I asked the first-year students how much good these preventive activities we have been discussing would be in reducing the occurrence of coronary heart disease. As you might guess, freshman students are very enthusiastic about everything when they first get here; all were convinced that being a marathon man would immortalize them. They even thought periodic examinations would be extremely valuable. They were positive about cessation of cigarette smoking and about eating a prudent diet. By the time they became fourth-year students, they were slightly cynical. They realized and accepted the hazards of smoking but were less enthusiastic about some of the other risks. They think, as most doctors do, that there is much you can do yourself which is probably of greater value than going to the doctor for a periodic examination.

Medical students are fairly healthy individuals because they have not adopted unhealthy lifestyles. They believe in the value of some of these risk-reducing measures. To be noticed especially is that as a student goes from the first to the fourth year of medical school, he exercises less, becomes heavier, and begins to consume alcohol more frequently. Still, very few smoke and blood pressures remain good. In comparing them with national averages for age, race, and sex, white medical students between the ages of 18 and 24

TABLE 6

MRFIT: INTERVENTION-CONTROL DIFFERENCE (mg/dl) IN LIPOPROTEINS AFTER 48 MONTHS

	Mean	Significance
Plasma Total Cholesterol	- 7.2	Yes
Plasma Triglycerides	- 6.0	Yes
HDL _c (high density lipoprotein cholesterol)	- 0.2	No
LDL _c (low density lipoprotein cholesterol)	- 5.7	Yes
VLDL _c (very low density lipoprotein cholesterol)	- 1.3	Yes

(Continued on page 609)

EKG of the Month

W. BARTON CAMPBELL, M.D.

An 18-year-old woman was admitted for evaluation of a heart murmur that had been present since early childhood. There was fixed splitting of the second sound at the base of the heart. A grade II systolic murmur was present at the left parasternal and pulmonic area. A two-dimensional echocardiogram showed right ventricular enlargement, right atrial enlargement, paradoxical septal motion, and left atrial enlargement (left atrial diameter 4.5 cm). An electrocardiogram was obtained (Fig. 1).

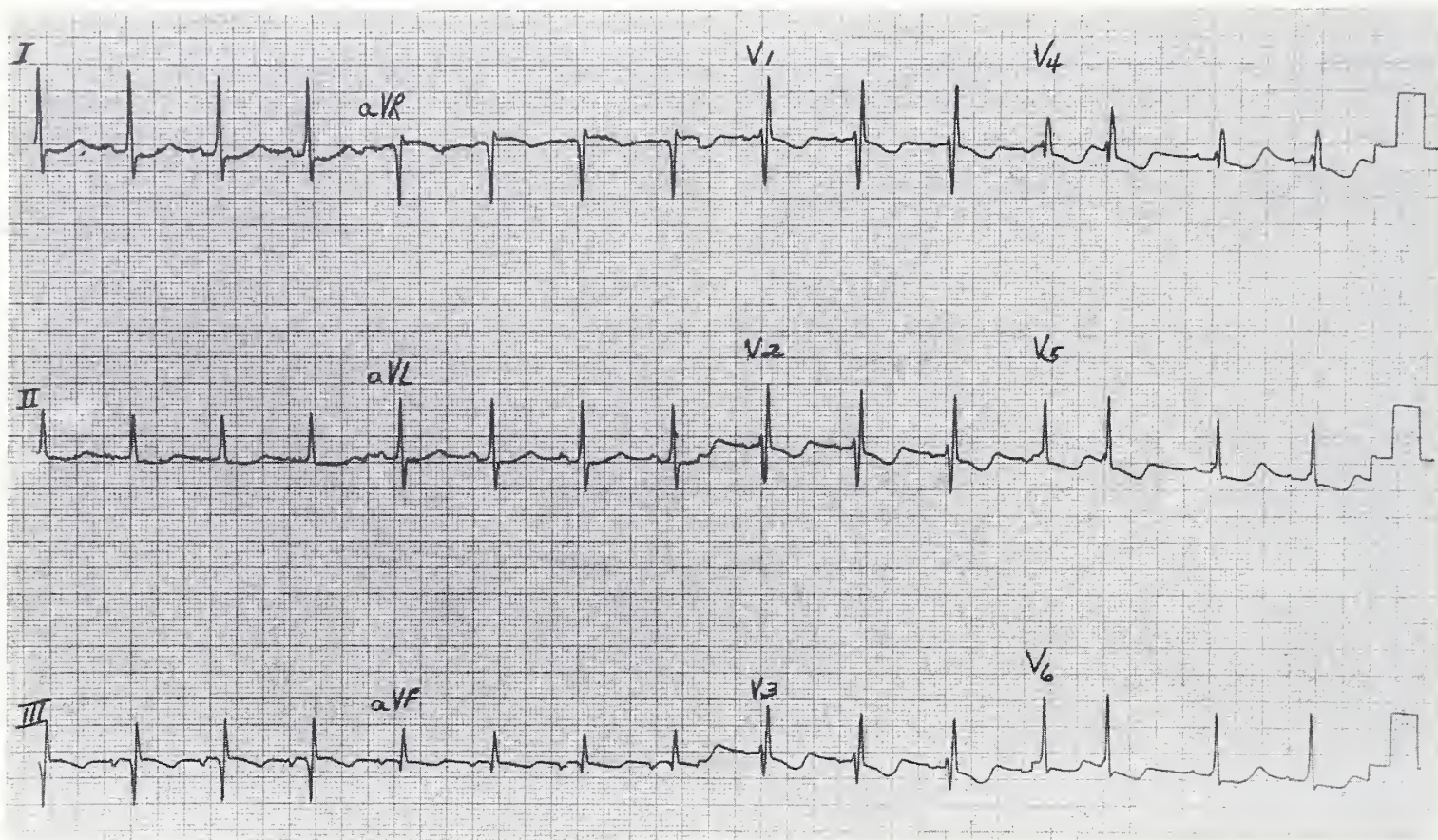


Figure 1

Discussion

The tracing shows regular rhythm with a rate of 93/min. The P waves are inverted in aVF indicating that the atria are depolarizing from their base cephalad. The direction of this depolarization is distinctly abnormal as the atria normally depolarize from the region of the sinus node at the junction of the superior vena cava and the right atrium. These inverted P waves in aVF therefore indicate an ectopic atrial pacemaker originating in the region of the coronary sinus.

A premature atrial contraction is noted in leads V₄ through V₆. The QRS complex has a normal duration. The S in standard lead I displays rightward late ventricular depolarization and a very prominent R' in V₁ results from prominent late anterior forces. These rightward and anterior forces suggest right ventricular volume increase. Volume overload of the right ventricle characteristically leads to hypertrophy of the crista supraventricularis and results in prominent rightward and anterior forces of the type seen in Figure 1. The slowing of these late forces results from impaired peripheral right ventricular conduction and is not due to impaired conduction through the

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

right bundle branch.¹

There is inversion of the T waves across the precordial leads. These repolarization abnormalities are distinctly abnormal and, although non-specific, are also consistent with right ventricular overload.

This tracing is characteristic of the type commonly seen with atrial septal defect.² The ectopic atrial pacemaker raises the possibility that the atrial septal defect may be a sinus venosus defect and/or be associated with a persistent left superior vena cava. A sinus venosus atrial septal defect is located high in the atrium and may interfere with normal sinus node development, while a persistent left superior vena cava may enhance pacemaking activity in the floor of the atria near the coronary sinus.³

This patient had cardiac catheterization carried out at St. Thomas Hospital by Dr. N. S. Babu. An atrial septal defect with a 4:1 left to right shunt and normal pulmonary arterial pressures was discovered. Repair of the atrial septal defect, a 2 x 2-cm secundum atrial defect, was car-

ried out by Dr. William Stoney. There was a notably enlarged coronary sinus measuring approximately 1.5 cm in diameter, the right superior vena cava was congenitally absent, and the persistent left superior vena cava drained via the coronary sinus. The atrial septal defect was closed without difficulty and the patient has subsequently done well. Absent right superior vena cava occurring in association with persistent left superior vena cava is a rare anomaly.⁴

CONCLUSIONS: (1) Ectopic atrial rhythm in association with absent right superior vena cava, (2) peripheral right ventricular conduction defect with atrial septal defect, (3) nonspecific ST-T wave changes, (4) premature atrial contraction.

REFERENCES

1. Perloff J: *The Clinical Recognition of Congenital Heart Disease*. Philadelphia, Sanders Publishing Co, 1970, p 237.
2. Lee YC, Scherlis L: Atrial septal defect. Electrocardiographic, vectorcardiographic and catheterization data. *Circulation* 25:1024, 1982.
3. Hancock EW: Coronary sinus rhythm in sinus venosus defect and persistent left superior vena cava. *Am J Cardiol* 14:608, 1964.
4. Karnegis JN, Wang Y, Winchell P, et al: Persistent left superior vena cava, fibrous remnant of the right superior vena cava and ventricular septal defect. *Am J Cardiol* 14:573, 1964.

Medical Grand Rounds . . .

(Continued from page 607)

years have much lower smoking rates than the national average; their systolic and diastolic blood pressures and serum cholesterol levels are also statistically lower than age-matched groups but their HDLs are the same. Their mean weight is approximately what it should be according to the Metropolitan Life Insurance weight tables.²⁴

REFERENCES

1. Hall JH, Zwemer JD: *Prospective Medicine*. Indianapolis, Methodist Hospital of Indiana, 1979.
2. *The Complete Program for Health Risk Appraisal*. Bureau of Health Education, Center for Disease Control, Atlanta.
3. Thorsen RD, Jacobs DR, Grimm RH, et al: Preventive cardiology in practice: A device for risk estimation and counseling in coronary disease. *Prev Med* 8:548-556, 1979.
4. Benfari RC: The Multiple Risk Factor Intervention Trial (MRFIT). III. The model for intervention. *Prev Med* 10:426-442, 1981.
5. Spitzer WO: Report of the task force on the periodic health examination. *Can Med Assoc J* 121:1193-1254, 1979.
6. Medical Practice Committee, American College of Physicians: Periodic health examination: A guide for designing individualized preventive health care in the asymptomatic patient. *Ann Intern Med* 95:729-732, 1981.
7. Hypertension Detection and Follow-Up Program Cooperative Group: Five-year findings of the hypertension detection follow-up program. 1. Reduction in mortality in persons with high blood pressure, including mild hypertension. *JAMA* 242:2562-2571, 1979.

8. Management Committee: The Australian therapeutic trial in mild hypertension. *Lancet* 1:1261-1267, 1980.
9. Stamler J: Population studies, in Levy R, Rifkind B, Dennis B, et al (eds): *Nutrition, Lipids, and Coronary Heart Disease*. New York, Raven Press, 1979.
10. Keys A: *Seven Countries. A Multivariate Analysis of Death and Coronary Heart Disease*. Cambridge, Harvard University Press, 1980.
11. Blackburn H: Diet and mass hyperlipidemia: A public health view, in Levy R, Rifkind B, Dennis B, et al (eds): *Nutrition, Lipids, and Coronary Heart Disease*. New York, Raven Press, 1979.
12. Rosenman RH, Brand RJ, Jenkins CD, et al: Coronary heart disease in the Western collaborative group study. *JAMA* 233:872-877, 1975.
13. Jolliffe N, Baumgartner L, Ringler SH, et al: The Anti-Coronary Club, the first four years. *NY J Med* 63:69-79, 1963.
14. Stamler J, Berkson DM, Young QD, et al: Diet and serum lipids in atherosclerotic coronary heart disease. *Med Clin N Amer* 47:3-31, 1963.
15. Dayton S, Pearce ML, Hashimoto S, et al: A controlled clinical trial of diet high in unsaturated fat in preventing complications of atherosclerosis. *Circulation* 40 (suppl 1):1-63, 1969.
16. Turpeinen O, Miettinen M, Karvonen MJ, et al: Dietary prevention of coronary heart disease: Long-term experiment: Observations on male subject. *Amer J Clin Nutr* 21:255-276, 1968.
17. National Diet-Heart Study Research Group: The National Diet and Heart Study, final report. *Circulation* 37 (suppl 1): 1-428, 1968.
18. Hjermann I, Holme I, Velje BK, et al: Effect of diet and smoking intervention on the incidence of coronary heart disease. *Lancet* 2:1303-1313, 1981.
19. Caggiula AW, Christakis G, Farrand M, et al: The Multiple Risk Factor Intervention Trial (MRFIT). IV. Intervention on blood lipids. *Prev Med* 10:443-475, 1981.
20. Russell MA, Wilson C, Taylor C, et al: Effect of general practitioners' advice against smoking. *Br Med J* 2:231-235, 1979.
21. Rose G: Strategy of prevention: Lessons from cardiovascular disease. *Br Med J* 282:1847-1851, 1981.
22. Farquhar JW, Wood PD, Breitrose H, et al: Community education for cardiovascular health. *Lancet* 1:1192-1195, 1977.
23. McAlister A, Puska P, Salonen JT, et al: Theory and action for health promotion: Illustrations from the North Karelia project. *Am J Public Health* 72:43-50, 1982.
24. Metropolitan Life Insurance Company: *Statistical Bulletin* 58:2-6, 1977.

Health Promotion Program

The health status of Americans in the last half of the 20th century has changed dramatically from the early 1900s. No longer are infectious diseases the leading causes of death. Diseases directly related to life-style are our leading killers, heart disease, cancer, and cerebral vascular accidents being the leading causes of morbidity and premature death for adults in the United States. Accidents, cirrhosis of the liver, suicide and diabetes also rank among the leading causes of death.^{1(p44)} and such things as nutrition, exercise, safety habits, alcohol and drug use, stress, and tobacco figure in over 53% of deaths.^{1(p35)} To combat this trend in life-style-related health problems, the Tennessee Department of Public Health is placing increasing emphasis on disease prevention and health promotion. A concerted effort by both the public and private sectors and by the medical profession is necessary if we are to improve the health status of Tennesseans. New and innovative approaches are being sought to encourage healthier life-styles.

In a combined effort, the Tennessee Department of Public Health and the Tennessee Medical Association sponsored a health promotion campaign last year called HEALTHSTYLE. Public service announcements, newspaper articles, television talkshows, health fairs, group presentations and articles in periodicals were vehicles to publicize the availability and use of the HEALTHSTYLE self-test, over 300,000 copies of which have been distributed statewide. A good portion of this number has been distributed to physicians in Tennessee who are interested in health promotion. The self-test is a good tool to teach self-responsibility for health.


Also joining in this community effort by donating assets and technical assistance have been companies such as National Life Trust (NLT), Hospital Corporation of America, and Service Merchandise, and voluntary agencies such as the American Heart Association, the American Lung Association of Tennessee, and the Mental Health

Association in Nashville.

Realizing the need for improved health status in the industrial and business workforce, the Tennessee Department of Public Health, the Nashville Academy of Medicine, and the Nashville Chamber of Commerce sponsored a conference on health promotion in business and industry in November, 1981. The largest employers in Middle Tennessee attended the seminar, which documented the direct and indirect cost to business and industry of life-style-related medical and health problems, presented a comprehensive approach to address the major problems, and shared industrial experiences in implementing various program options. Continued forums on health topics for business and industry are planned. Again, community resources were generously contributed to this seminar. First American Bank and Commerce Union Bank hosted the conference.

New programs, along with more traditional ones, are being sponsored to achieve a reduction in morbidity and premature deaths. Health Risk Appraisal, a computerized analysis of a person's health risks and accompanying intervention techniques, stress reduction workshops, the child safety restraint loaner and education programs, and health education activities for adolescents are being conducted.

The trend toward good health habits has been growing in recent years. A combined effort of all health professionals will increase public awareness of the factors that contribute to good health. As a result, we will have a healthier Tennessee and a healthier America.

For further information on the Health Promotion program within the Tennessee Department of Public Health please call or write to Ms. Brenda Lepley or Dr. Jeffrey Harris, Health Risk Reduction Section, R.S. Gass State Office Building, Nashville, TN 37216. 

REFERENCES

1. Office of Health Analysis and Planning for Preventive Services, Center for Disease Control, Public Health Service. Health and Human Services: *Ten Leading Causes of Death, 1977*. Atlanta, Center for Disease Control, 1980.

From the Tennessee Department of Public Health, Nashville.

These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

health
issues
of the
80's

the new federalism and medicine

The fate of President Reagan's "new federalism" proposal, which would shift programs between federal government and the states, is yet to be decided. And only general plans are known so far. Legislation to accomplish the program responsibility shifts is still to be drafted, and officials at the White House and the National Governors Association have reportedly reached an impasse in negotiations for the swap. But the Administration can be expected to continue pressing for action on the proposal, and Presidential Spokesman Larry Speakes has indicated a compromise may yet be reached.

A key component of the "new federalism" is moving financial responsibility for the Medicaid program from the states to the federal government in 1984. At the same time, under the President's proposal, states would accept responsibility for administration and funding of the Aid to Families of Dependent Children (AFDC) and food stamp programs.

While the federal Office of Management and Budget estimates that states, overall, would come out ahead in Fiscal Year 1984, the Congressional Budget Office figures show states would have a net loss in the exchange. Both estimates for individual states, however, show some very large gain or loss figures. In any case, future economic conditions may affect the accuracy of the estimates.

A second part of the federalism initiative calls for returning responsibility for 124 categorical grant programs, including some health programs, back to the states—this is the "tumbback" provision. These programs are estimated to cost \$30.2 billion in FY1984 (assuming about \$5 billion in FY1983 cuts).

To finance the program tumbback and equalize gains and losses among states, a federalism trust fund would be established. In FY1984, the fund of \$28 million would come from windfall profits taxes (\$16.7 billion) and federal excise taxes (\$11.3 billion) on gasoline, tobacco, alcohol, and telephone services.

Between 1984 and 1987, states could choose to take the funds they would have received under the 124 categorical programs, either through the same categorical structure or without the categorical restrictions (similar to revenue sharing). In FY1988, these grants would end, and the trust fund would decrease by 25 percent each year. States would then have to raise taxes or cut program budgets accordingly.

Some additional features of the proposal have been announced, but many details are missing. Many questions are unanswered, also. Particularly interesting to physicians will be resolution of such questions as: Will the federal government equalize the state-by-state differences in Medicaid eligibility and benefits? If so, how? Will states be required to continue provision of services at the same level to all recipients now eligible for AFDC and food stamps? Will the initial trust funds be sufficient? Will states be able to maintain quality and quantity of various program services as trust funds are phased out?

We, the physicians of America, must continue our advocacy of high quality medical care for all. Working together, we must ensure that the three "A's" of good health programs—availability, accessibility, and acceptability—are retained. At the national level, the AMA will continue to analyze the proposal and details of it as they are developed. The effects of "new federalism" on health care programs in the future could be vitally important.

Such leadership requires your support. The larger our membership, (now nearly 240,000) the greater our influence and our strength as the only representative for all of medicine. **For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196 collect.**





GEORGE W. HOLCOMB, JR.

Decisions, Decisions, Decisions

The installation of the President of the American Medical Association is indeed impressive. I confess I had always envisioned this as a somewhat routine ceremony. Instead I found it an experience that kindled a re-dedication to the highest standards of medical practice. Sitting with the presidents of the other state associations, I felt a deep sense of pride in representing you, the members of the Tennessee Medical Association.

Prior to the installation, the House of Delegates deliberated and considered alternatives to the many thorny issues facing medicine today. Among the numerous decisions made by the delegates, the following five need special emphasis. These decisions will have significant impact on you and me in the months to come.

The delegates voted to authorize the AMA to establish national health priorities. A commission will be appointed to study in depth the health needs in this country and identify each in order of its importance. This ambitious plan is expected to involve all phases of private practice and will determine how medicine is to be practiced and reimbursed for the remainder of this century.

The House of Delegates considered another sweeping change—this one in the field of medical education. Approval was given to support revival of the general internship. It was felt that students are allowed too much freedom in selecting elective courses during their last two years of medical school. For residents entering internal medicine, pediatrics and general surgery, at least four months of training will be required in major specialties other than the primary one to which the physician was appointed. Medical schools also were urged to accept students with backgrounds in the arts, humanities and social sciences, as well as the biological sciences. Additional emphasis was placed on personal qualities of warmth and concern for others in the selection process.

In the area of patient care, and based upon recommendations of several scientific bodies, the House determined that: (1) Periodic examinations of healthy people are important for detecting disease. (2) Additional investigation is needed to determine the value of tests used for discovering disease in healthy individuals. (3) Testing should be advised only when adequate treatment and follow-up is available in order to avoid expensive repetition of these studies. (4) Physicians should articulate clearly their recommendations for good health practices and should improve their skills in the management of patients with alcohol excess, obesity, and anxiety.

Tougher rules for foreign graduates also were recommended. State medical licensing boards will be urged to approve only graduates of medical schools that are accredited by the Liaison Committee on Medical Education. The LCME accredits medical schools within the United States and Canada, but none in foreign countries.

The House also took a stand in support of local voluntary health planning, but only with physician input and a distinct separation of the planning process from regulatory functions. Continued effort to repeal the Health Planning Act of 1974 was endorsed.

As I left Chicago, I was reassured in the strength and dedication of our elected representatives and the AMA professional staff. We too often take for granted, complain about, or question what they do in our behalf. Their interest, their deep and broad knowledge, and their willingness to struggle with the challenges to our health care system should be acknowledged and appreciated by all of us who practice medicine today.

George Holcomb Jr MD

Journal of the tennessee medical association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication.

Address papers, discussions and scientific matter to:
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson
GEORGE W. SHANNON, M.D., Jackson
CLAUDE H. CROCKETT, JR., M.D., Bristol
H. VERDAIN BARNES, M.D., Chattanooga
FRANCIS W. GLUCK, JR., M.D., Nashville
JOHN B. THOMISON, M.D., Nashville, Ex-Officio

SEPTEMBER, 1982

editorials

"Primum Non Nocere" Means Safety First

I interned at a time near the end of World War II when medical school faculties had been depleted by the needs of the military, and many positions were filled by professors emeriti. Such was the case at Ohio State, where Bob Zollinger had temporarily yielded his chair in surgery to the then-retired previous chairman, Dr. Verne Dodd. Dr. Dodd operated with a pair of cotton gloves between the rubber ones and his un-

scrubbable, crusted, often bleeding hands, the result of having set fractures under fluoroscopy in the early days of the x-ray, which in those days was considered innocuous. That the fluoroscope was a handy gadget, and one that revolutionized medicine, is clear fact, but time has made it equally clear that caution and precautions need to be exercised in its use. Because of the nature of radiation damage it took a long time for that to become apparent, and it did not until a lot of irreparable harm had been done.

What is true of x-ray is also true of almost all of the energy spectrum. It is selective, as there are windows in the visible light and apparently in the radio frequency portions of the spectrum, but we have no reason to assume that application of any portion at all sufficiently amplified or with prolonged exposure might not produce damage. Microwaves and the electromagnetic emanations from high voltage electric power lines have both been demonstrated to do so.

In a letter to the editor in this issue of the *Journal*, John R. Semmer, M.D., has injected a note of caution on the more or less indiscriminate use of ultrasound equipment for diagnostic purposes by the essentially untrained. Although he has chosen to dwell primarily on diagnostic inaccuracies resulting from faulty technique or misinterpretation, the same caveat applies to use of ultrahigh frequency sound waves as to that of other portions of the spectrum. Though these waves have been assumed to be harmless, we cannot yet assess their long-term effects because of the short time equipment employing them has existed.

An early use of ultrasound was for cleaning instruments too delicate for ordinary methods. If those waves will remove debris and dirt, it is not outside the realm of possibility that they might also cause damage to the tender tissues of the developing fetus, damage that might not be detected until much later, and then not be traceable to a pre-birth "picture" of the individual.

Therapeutic paradoxes in medicine have always been recognized, since much of what we do is dangerous to the patient (and sometimes to the doctor, too). The paradox is often frightening, and results from employment of treatment that is frequently the lesser of two evils. We should never be in the position of tampering with the human body, mind, or spirit "just for fun," even though the fun may be the patient's. The use of any diagnostic or therapeutic means by the unskilled and untrained is both unethical and im-

moral. Nothing in our armamentarium is a toy, and none of them at all should ever be considered absolutely safe.

J.B.T.

On Disposing of the Fruits of Our Labor

On September 28, 1542, a Spanish expedition of two small ships under the command of the Portuguese captain Juan Cabrillo sailed past Point Loma, California into San Diego Bay, which he named San Miguel and decribed as a "closed and very good port." Since the days of World War II it has been the home of the U.S. Pacific Fleet, and standing beneath Cabrillo's statue on Point Loma early one morning last spring I watched a sizeable contingent of that fleet steam past the point and out to sea. A lot of that fleet lies docked there in "mothballs," but some of its elements are being refitted and put back into service in our re-expanding armed forces. Though at the time there was a war going on in the Falkland Islands between Argentina and Britain, the fleet's activity was doubtless a routine training mission and had nothing to do with it. That war, though short and relatively small as wars go, pointed up both the necessity for and some of the vulnerabilities of conventional arms, and as such was a valuable exercise, though extremely costly and wasteful of lives and material, as all wars, small or great, always are.

Unlike the Soviet Union, where the government dictates all policy, democratic nations always have an inner struggle as to how the fruits of their labor are to be disposed of. Our elected representatives struggle with this in the legislative process, and all of us struggle with it as we go about electing representatives who will vote as we wish them to. (If we do not, we have no cause—or right—to complain.) To some degree or another we are committed as a people to military superiority (or at least parity), to a massive health care program, and to social security, and at the same time to low taxes and a balanced budget. That these are at least partially incompatible should appear obvious, though how they are may not.

First, the easy part. We cannot have all the things we want, and have the federal government pay for them, and at the same time have low taxes and a balanced budget. Even if we cut out all the

waste we cannot—and there is vast disagreement as to what constitutes waste, depending on whose pork barrel you dig into.

It is clear to everyone that the major burden for the military must rest on the federal government, regardless of the size or extent of the program; what that should be is less clear. It is also unclear whether nuclear or conventional weaponry is the more necessary. People—lots of people—get killed by both, and it is more a matter of how best to avoid annihilation, at least our own. Still less clear at the moment than any of the above is where the burden for care of the old and infirm rests.

A major commitment to both armament, which destroys, and health care, which heals, seems an inconsistency, unless you consider that being on the losing side in a war is much more unhealthy than being on the winning side. Being taken over or, as Mr. Khrushchev said, "buried," without a war does not do much to improve health, either, considering the plight of the non-Soviet countries behind the Iron Curtain, some of our ostrich-like fellow travelers to the contrary notwithstanding.

Perhaps you spent your Labor Day holiday, which will by now have come and gone, contemplating these matters touching on the disposal of your labor's fruits.

But then again, perhaps you didn't.

J.B.T.

Eating Crow

Once upon a time, about 2,000 years ago, there lived a man in Galilee, who when he died at age 33 had never committed a sin. Not everybody believes that, but whether you do or not makes no difference for purposes of this editorial. There are those today who believe if one is completely filled with God's Spirit, he will not sin. On theoretical grounds, I cannot disagree with that, but I have never seen such a person. Error is rampant among both the saved and unsaved.

As all of you already know, the boss may not always be right, but he's always the boss. The same goes for editors. The editor may not always be right, but he's always the editor, and as such is responsible for every word in his publication.

When I was a medical student on Pediatrics nearly 40 years ago I had a patient with lipodystrophy who had a peculiar facies referred to as gargoylism, because such children resemble the gargoyles on medieval cathedrals. This child was

a great favorite on the wards—funny looking, but happy. He was referred to as a “gork.” (“Gargoyle” is actually not a much better term.) Over the years since then, though I seldom use the word, it has acquired a sort of pseudo-medical patina.

Every month the *Journal* receives from the AMA the “National News.” It always (every month) comes after the rest of the issue has gone to press. I am therefore pressured every month by my most capable managing editor, who has charge of such things, to decide immediately if not sooner what parts of it to print, and to make headlines for the parts we do. An article came through last month on children with the Down syndrome (once called mongolism, and erroneously referred to now as “Down’s” syndrome) to the effect that the HHS Department had decreed that they and all other handicapped or deformed patients receive full therapy, and not be allowed to perish, as had occurred in Indiana, and more famously (or notoriously, as you prefer), in England.

In my hastily concocted headline, I referred to such patients as “gorks.” It was an unfortunate choice of words, because although it is not necessarily pejorative in my vocabulary, it offended at least two physicians who took the trouble to write (see Our Mail Box), and doubtless a lot of others who didn’t. To all those I apologize and say that they are correct: the word has no place in a scientific publication, and was at least in poor taste; at worst it was, as one correspondent said, deplorable.

I must, however, take exception to the implication made by the same observer that the headline was in any way passing judgment on the HHS decision. It was entirely non-judgmental; it was simply descriptive. Since it has been called into question, I shall now go on to my position on the matter.

This month’s issue of *The Sciences*, a publication of the New York Academy of Science, carried an article by Louis Lasagna, M.D., Professor of Pharmacology and Toxicology in the New York University system, on the Down syndrome. It was in fact a diatribe against a recent jury decision acquitting a physician in England of a charge of murder after he allowed a patient with the Down syndrome to die for want of nutritional support, at the wishes of the family. I thought the article wholly inappropriate until I reached the last few paragraphs, in which Dr. Lasagna revealed that he himself had a happy, loving child with the syndrome, who though mentally handicapped had been a joy to his family. I bow to Dr. Lasagna’s

feelings, but nevertheless I have some reservations.

I have made it abundantly clear in these pages that I believe a conceptus becomes an individual when the ovum is fertilized by the sperm and therefore constitutionally has full protection under the law. I have also made it plain that I believe the life of no individual is forfeit without just cause. What that cause is, though, is established by society. Every one of us lives at the sufferance of our own society, since regardless of any absolutes, morals are prescribed by society alone. The injunction “Thou shalt not kill,” for example, is subject to either broad or narrow construction. So is “Thou shalt not steal.” Except where it is convenient to do so, society seldom chooses the narrow one.

One of the reasons for doing amniocentesis is to establish early whether or not a fetus has trisomy, which would lead to the Down syndrome. Such a diagnosis is considered absolute indication for interruption of pregnancy should the mother wish it. Why then, I ask, should an infant with Down syndrome be protected, and a fetus with the same condition not be, or vice versa? It is an arbitrary decision of the courts. (I should add that both the courts and the legislative branch have had a lot of trouble with this. Both have sought to shift to “science” the decision as to when life begins. The answer is: it begins when society thinks it begins. It is a legal—and theological—issue.)

So while I took no position in my headline, I support the decision of HHS on the grounds of my own beliefs; at the same time, I think it is hypocritical, given our present laws. My choice of words for the headline was unfortunate, and as most of us have had to at one time or another, I eat crow.

J.B.T.

On Equal Protection

I have avoided the issue of John Hinckley’s acquittal thus far primarily because I have written so often on the release of dangerous people onto society that my tool has become blunted. It has been pointed out since Hinckley’s acquittal that the insane have for centuries enjoyed special privileges under British common law, as they did also under Roman law, on which our system is based. That stems, of course, from an ancient fear of the insane, who were thought to be specially blessed

of the gods, and so sort of "out of it." It is also a reaction to the horrible conditions in the asylums of two or three centuries ago.

To release a supposedly cured individual whose affliction never caused society or himself any harm is certainly a justifiable recognition of individual rights. But it is something else again to burden society with an individual who has once proved himself dangerous. Our laws say (or have been interpreted as saying) that to detain against his will any mental patient, even one "once" criminally insane, unless he is known to be dangerous, violates his individual rights. The individual rights of the citizens that make up society need protection, too, though, and psychiatrists admit their inability to tell whether any individual is dangerous or not. That society is ill-served by the release of any such person has been proved time and time again, and has been called to the attention of courts and legislators on countless occasions. The American Psychiatric Society has even adopted a statement to the effect that to burden psychiatrists with making such determinations is unacceptable.

Notwithstanding our dedication in theory to equal treatment under the law for all individuals, it is demonstrated daily that in practice the law is unevenly applied. While one regrets the inconvenience to President Reagan, and the suffering he endured, it is, despite his exalted position, of no greater degree, and is therefore no more to be deplored, than the anguish suffered by the family of, say, the Nashville jeweler gunned down by a released murderer.

I will bet you, though, it will have more effect.

J.B.T.



Ultrasound

To the Editor:

The rapid developments in the state-of-the-art ultrasound technology now offer the physician providing prenatal care with heretofore unknown opportunities in making fetal judgments. The same technology which provides these unprecedented abilities also places maximum levels of responsibility on that same individual to maintain high levels of quality control.

Ultrasound indeed gives the medical examiner, as well as the patient-mother (and father), the ability to "see" the obstetrician's "second" patient. It is very rewarding to the physician and patient alike to evaluate the fetus "in utero," and everyone wants a picture. For some, in an effort to stay current in their practice offerings, it is very tempting to buy a machine and "do" ultrasound.

With the development of smaller, relatively inexpensive, mobile, and easy to use units, ultrasound is being performed by more and more obstetricians, family practitioners, radiologists, and technicians. The information that can be obtained from ultrasound is almost unlimited. However, persons inexperienced in using ultrasound not only run the strong likelihood of getting inaccurate data on the fetus, but also risk shattering the parents' high level of bonding enthusiasm and excitement for the pregnancy, possibly causing long-lasting psychological problems.

We must take time to think about who is doing ultrasound and what kind of information they are generating. Ultrasound should be done with a definite purpose in mind with a properly trained individual using good techniques, proper equipment, and adequate time. We all know of cases where major errors in diagnosis were made. Many of these errors are made by experienced professionals who use ultrasound daily. We can only imagine how many errors are made by less experienced, rushed, or infrequent users.

We all must know our own abilities and/or the abilities of our sonographers. Obstetric ultrasound should be selectively done only by an individual who is capable of assessing a clinical situation and integrating this with a sonic finding. Major errors generated for whatever reason will weaken ultrasound as a trusted diagnostic tool. It should be remembered that while ultrasound is considered a safe procedure, long-term follow-up has not been accomplished. Ultrasound should be used as a tool in the process, rather than a process in and of itself.

John R. Semmer, M.D.
Assistant Professor of OB/GYN
Director, East Tennessee
Regional Obstetrical Program
1924 Alcoa Highway, U-27
Knoxville, TN 37920

Justified Objections

To the Editor:

In the July, 1982 issue of the *Journal*, in the section of National News from the AMA's Office in Washington, D.C., is a heading "Gorks Must Get Full Rx" (*J Tenn Med Assoc* 75:499-500, 1982). I would suggest that the term "gorks" has no place in a medical journal as it has negative connotations in regard to helpless, malformed, or deformed humans. These individuals should be accorded every basic human dignity. It behooves us in the medical profession and, in particular, editors charged with the publication of medical journals to insure that human dignity is maintained. Disagreement with the HHS can be voiced without resorting to de-

rogatory inferences regarding human patients. Indeed the handicapped have enough difficulties without those of us in the medical profession imparting our own euphemisms to them.

Charles A. Fish, M.D.
607 Baxter St.
Johnson City, TN 37601

To the Editor:

While scanning the July issue of your *Journal*, I encountered a rather disturbing article which—even after a week of reflection on the matter—compels me to comment on it. Though medical training can often make us somewhat callous toward those we feel may be “unsalvageable,” referring to handicapped individuals as “gorks” as in the news article, “Gorks Must Get Full Rx, Says H₂S” (*J Tenn Med Assoc* 75:499-500, 1982), is deplorable.

The case reported on, that of “Infant Doe” of Indiana, was an instance in which an individual was murdered by the premeditated act of withholding life-saving medical care so that the child’s family would not be “inconvenienced” by having to care for a disabled child. Though this unfortunate child had Down’s syndrome and esophageal atresia, it could probably have been salvaged and might very well have become a happy and loving adult. We all have patients with Down’s who though less intelligent than many are still able to function in a supportive family environment. Consequently, to dismiss these and similar individuals as “gorks” is neither professional nor even humane. If we as physicians begin to tacitly approve such “mercy killings,” then we seriously devalue human life. I realize that the heart of this article was relatively unbiased, but the title implies that the HHS Department should be reprimanded for even suggesting that some attempt should be made to help the handicapped.

Robert S. Dotson, Jr., M.D.
575 Oak Ridge Turnpike
Oak Ridge, TN 37830



Clayton Millard Brodine, age 61. Died June 11, 1982. Graduate of University of Tennessee College of Medicine. Member of Knoxville Academy of Medicine.

Julian Q. Early, age 64. Died June 20, 1982. Graduate of University of Virginia College of Medicine. Member of Sullivan-Johnson County Medical Society.

Oliver Curtis Jeffers, age 54. Died July 1, 1982. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Walter Phillips, age 71. Died June 22, 1982. Graduate of University of Tennessee College of Medicine. Member of Washington-Carter-Unicoi County Medical Association.

William Givler Shull, age 69. Died June 27, 1982. Graduate of Loma Linda University College of Medicine. Member of Chattanooga-Hamilton County Medical Society.

Hugh F. Swingle, age 69. Died May 22, 1982. Graduate of Duke University School of Medicine. Member of Washington-Carter-Unicoi County Medical Association.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

James Phillip Davis, Jr., M.D., Chattanooga
Robert L. Villalobos, Jr., M.D., Chattanooga

COFFEE COUNTY MEDICAL SOCIETY

William J. Sanders, IV, M.D., Tullahoma

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

Robert Edwin Dorlon, Jr., M.D., Jackson
Daniel Lee Honeycutt, M.D., Jackson
Ronald Clyde Tillman, M.D., Jackson

KNOXVILLE ACADEMY OF MEDICINE

Robert W. Booher, M.D., Louisville
James Parks Hitch, M.D., Knoxville
Mark S. Mumford, M.D., Knoxville
Robert E. Pearce, M.D., Knoxville
Mark D. Prince, M.D., Knoxville

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

John M. Cummings, M.D., Memphis
William R. Frederick, M.D., Cordova
Kenneth Lee Hines, M.D., Memphis
Jack T. Hopkins, M.D., Memphis
Daniel P. Marshall, M.D., Memphis
William Henry Moretz, Jr., M.D., Memphis
Robert E. Pollnow, M.D., Memphis
James Clayton Stoddy, M.D., Memphis
William O. Whetsell, Jr., M.D., Memphis
Craig W. Williams, M.D., Memphis

MONTGOMERY COUNTY MEDICAL SOCIETY

Janice B. Spann, M.D., Clarksville

ROBERTSON COUNTY MEDICAL SOCIETY

Paul Douthitt, M.D., Springfield

WILLIAMSON COUNTY MEDICAL SOCIETY

James P. Sutton, M.D., Nashville
J. Caleb Wallwork, M.D., Brentwood

WILSON COUNTY MEDICAL SOCIETY

Kelly G. Gregory, M.D., Lebanon

TMA Members Receive AMA Physician's Recognition Award

Fifty-two TMA members qualified for the AMA Physician's Recognition Award during June, 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Hagop S. Akiskal, M.D., Memphis
George E. Allen, M.D., Chattanooga
Benjamin L. Beatus, Jr., M.D., Memphis
James E. Becker, M.D., Knoxville
Wallace B. Bigbee, M.D., McMinnville
John M. Bishop, M.D., Somerville
Terry W. Branson, M.D., Chattanooga
Alvin S. Crawford, M.D., Bristol
Kenneth L. Dickson, M.D., Brownsville
Halbert B. Dodd, M.D., Union City
Prasad S. Duggirala, M.D., Memphis
Vijaya L. Duggirala, M.D., Memphis
Raymond A. Finney, Jr., M.D., Maryville
Lewis W. George, M.D., Memphis
Conrad L. Grabeel, M.D., Knoxville
Frederick L. Haley, M.D., Franklin
John W. Hammon, Jr., M.D., Nashville
Albert F. Heck, M.D., Memphis
Crampton H. Helms, M.D., Morristown
Richard W. Henderson, M.D., Knoxville
Irving R. Hillard, M.D., Nashville
Jack D. Hixson, M.D., Chattanooga
Frank L. Jayakody, M.D., Shelbyville
Thomas M. Jordan, M.D., Nashville
Richard R. Jost, M.D., Rockwood
Clyde A. Kyle, Jr., M.D., Cleveland

Harry M. Lawrence, Jr., M.D., Chattanooga
Buford B. Ledbetter, M.D., Clarksville
Joe S. Levy, M.D., Memphis
George S. Lovejoy, M.D., Memphis
Arvell S. Luttrell, M.D., Knoxville
John B. Lynch, M.D., Nashville
Clarence B. Marsh, M.D., Chattanooga
John J. McCaughan, Jr., M.D., Memphis
Harry C. Moss, Jr., M.D., Johnson City
William M. Murphy, M.D., Memphis
Thurman L. Pedigo, M.D., McMinnville
Thomas G. Peters, M.D., Memphis
Richard D. Pinson, M.D., Nashville
Charles B. Pittinger, M.D., Nashville
Richard L. Prager, M.D., Nashville
Billie H. Putman, M.D., Memphis
Gade S. Rao, M.D., Savannah
John H. Saffold, M.D., Knoxville
John A. Shull, M.D., Chattanooga
Moore J. Smith, M.D., Chattanooga
Frank W. Stevens, M.D., Nashville
Lowell E. Vinsant, M.D., Maryville
Robert E. Ware, M.D., Knoxville
Joseph F. Weiss, M.D., Memphis
David D. Wilson, M.D., Knoxville
Michael J. Winsor, M.D., Kingsport

personal news

Victor Braren, M.D., Nashville, has been appointed a member of the National Cancer Advisory Board by President Ronald Reagan.

James Fleming, M.D., Nashville, has been elected president of the Southeastern Society of Plastic and Reconstructive Surgeons.

James W. Hoback, Jr., M.D., Chattanooga, has been elected to Fellowship in the American College of Cardiology.

James W. Leach, M.D., Columbia, has been elected to Fellowship in the American College of Obstetricians and Gynecologists.

Ronald Molloy, M.D., Chattanooga, has been elected president of the Greater Tennessee Affiliate of the American Diabetes Association for 1982-1983.

Bergein F. Overholt, M.D., Knoxville, has been chosen president-elect of the American Society for Gastrointestinal Endoscopy.

James T. Robertson, M.D., Memphis, has been elected chairman of the American Association of Neurological Surgeons' cerebrovascular section.

Leon Ward, M.D., Columbia, has been elected to Fellowship in the American Academy of Otolaryngology.

medical news in tennessee

Leavell Meharry Dean

Walter F. Leavell, M.D., a Meharry alumnus and presently vice-dean and associate professor of medicine, the University of Cincinnati College of Medicine, has assumed the office of dean of the medical school at Meharry Medical College.

Dr. Leavell, 48, is a graduate of the University of Cincinnati and received his M.D. degree from Meharry Medical College. He completed his residency in medicine at the State University of New York (SUNY), Upstate Medical Center.

Dr. Leavell is a native of Cincinnati, Ohio. He is married and has two sons.

From the AMA's Office in Washington, D.C.

New Cuts in Medicare/Medicaid Proposed

Major revisions in Medicare and Medicaid and important changes in pension plan provisions are building momentum toward final congressional passage.

Senate approval of a package bill carrying out sweeping program changes and raising some \$100 billion in taxes over three years put immediate pressure on the House to follow suit. The Senate vote was along party lines, 50 to 47, on a measure adopted by the Senate Finance Committee.

The Senate bill incorporated both reduced spending and tax hikes as a follow-through to the budget resolution approved earlier by Congress mandating such actions.

The House, compelled to approve a bill similar to the Senate's in order to comply with the budget mandate, in an election-year gamble has agreed to go directly to conference on the Senate's bill to increase taxes by \$98.5 billion over three years and impose major new cuts in Medicaid and Medicare.

The House Energy and Commerce Committee approved a bipartisan plan for cutting \$2.1 billion over three years from Medicaid and from federal reimbursements to doctors under Medicare.

The savings fell about \$160 million short of the budget instructions, but attempts to make deeper cuts were defeated easily.

"At least we controlled the damage," said Health Subcommittee Chairman Henry A. Waxman (D-CA).

Together with Medicare cuts approved earlier by the Ways and Means Committee, the proposed House cuts in the two programs over three years include \$700 million from Medicaid and \$12.9 billion from Medicare.

The Senate bill provides many reimbursement restrictions on Medicare and Medicaid, with hospitals hit the hardest. The tax side includes provisions making it tougher to claim medical expenses as deductions and limitations on pension plan contributions aimed at discouraging professionals such as physicians from incorporating.

Following are the principal provisions of the Senate bill dealing with health or health-related matters:

TAXES

- **Deductions**—Federal income tax deductions for medical expenses would be limited to expenses of more than 7% of adjusted gross income, compared with the current 3%. The present provision for deduction of 50% of up to \$150 for costs of medical insurance would be limited to half of \$100.

- **Pensions**—One of the most controversial of the tax features, this provision drops the maximum limits on contributions to corporate defined-contribution and

defined-benefit pension plans, to \$30,000 a year and \$90,000 a year, respectively. At the same time, tax deferred contribution limits for Keogh plans for the self-employed would be liberalized, doubling to \$30,000 a year after a phase-in period.

- **Federal Employees**—For the first time, federal workers would be brought under the Medicare program (but not regular Social Security) and be required to pay the hospital tax, netting the government \$2.3 billion in added revenues over the next three fiscal years.

SPENDING

More than \$4 billion a year would be saved by the government for Medicare and Medicaid under a series of provisions that included many sought earlier in the year by the Reagan administration. Most of the cuts in projected outlays affect the Medicare program, especially hospitals and physicians.

The Medicare spending provisions include:

- **Physician Reimbursement**—Freezes reimbursement for 1983 and allows only a 5% increase for 1984.

- **Hospital-Based**—Only hospital costs allocated to physicians' services to the hospital would be allowable in determining the hospital's cost reimbursement and these costs would be subject to limits.

- **Surgery**—Prohibits reimbursement for assistants at surgery in hospitals where a training program exists in surgery except under "exceptional medical circumstances."

- **Radiology-Pathology**—Reduces reimbursement for inpatient services to 80% from the present 100% reasonable charges.

- **Peer Review**—The Health and Human Services Department would be required to contract for utilization and quality control peer review.

- **Hospital Reimbursement**—Limits increases generally to 10% annually.

- **Ancillary**—Laboratory services, x-rays and other ancillary costs would be brought under the Section 223 limits that restrict increases to no more than 108% of the costs for these services incurred by other hospitals of the same type.

At about the same time as the tax spending bill came before the Senate, the House Ways and Means Committee approved in a rare closed-door session a budget measure dealing only with Medicare. Many of the provisions were identical or similar to those of the Senate bill, but there were several important differences. The Ways and Means bill set spending targets or caps for hospitals in various groupings, a plan endorsed by the American Hospital Association and the Federation of American Hospitals.

The Senate bill and the Ways and Means measure endorse the concept of prospective reimbursement for hospitals, but offer no specific plans for carrying out the idea, which is under study by the administration. The House bill calls for a voucher system to allow Medicare beneficiaries to pay for private coverage with a Medicare voucher.

Medicare beneficiaries would be allowed to enroll in qualified health maintenance organizations (HMOs) with the government paying a premium equal to 95% of the average area per capita cost for Medicare patients. The HHS Department would have to devise a

way to work the HMO plan.

The House bill also provides Medicare reimbursement for hospice services for the terminally ill, one of the few added benefits in the legislation.

Dropped from present law would be the provision requiring a three-day hospitalization before admittance to a skilled nursing facility.

AMA Testifies on Cuts

Prior to the House's unusual action of going directly to conference on the Senate bill, the American Medical Association testified before a House Energy and Commerce Subcommittee on the Senate proposed Medicare and Medicaid cuts.

The Association favored most of the Senate's Medicaid cuts and opposed most of its proposals to change the Medicare program.

Before addressing the proposed cuts in detail, AMA Executive Vice President James H. Sammons, M.D., urged subcommittee members to "... bear in mind that program changes made with the goal of short-term budgetary savings are not going to solve the long-term needs of this nation. The AMA is planning a comprehensive examination of the long-term problems and has committed itself to work for their solutions. This study is in its initial stages."

In its testimony the AMA opposed the Senate's package of Medicare Part B cuts that would:

- Tighten reimbursement of hospital-based physicians by allowing the Health and Human Services Secretary to determine "reasonable compensation levels" and by allowing reimbursement only for services directly provided to patients.
- Prohibit payments for drugs whose effectiveness has not been established by the Food and Drug Administration.
- Reduce physician reimbursement for hospital outpatient services by an amount reflecting hospital overhead.
- Prohibit reimbursement for assistants at surgery in hospitals with surgery training programs.
- Allow prospective reimbursement of health maintenance organizations for services to Medicare beneficiaries at 95% of the local Medicare average per capita cost. (Ways and Means also has endorsed the latter three proposals.)
- Require review of Medicare services by peer review groups similar to professional standards review organizations or by Medicare carriers.

Dr. Sammons noted that the AMA supported experimentation with the HMO proposal, but expressed concern about a provision requiring HMOs to provide extra benefits to Medicare patients if reimbursement exceeds overall costs. "This will effectively establish two classes of benefits," he said. Instead, savings should be returned to the program to benefit all Medicare recipients.

The AMA supported Part B changes that would reimburse inpatient radiology and pathology services at 80% of reasonable charges instead of 100% as now allowed; repeal optometric coverage for services to pa-

tients after cataract surgery; delay eligibility to the month following a beneficiary's 65th birthday; require employers to maintain private insurance for Medicare-eligible employees; index the Part B deductible to reflect inflation, using the medical component of the Consumer Price Index; and fix the Part B premium as a percentage of program costs.

Dr. Sammons noted, however, that if the current trend of cost increases continues, future beneficiaries could be faced with substantial premium expenses.

Repeal of the nursing differential, advocated by the Senate bill, could shift costs to non-Medicare patients, Dr. Sammons told the subcommittee. Commenting on other proposed Medicare cuts, Dr. Sammons said the Association supported imposing minimal copayments for home health services, as well as eliminating the three-day prior hospitalization requirement for skilled nursing coverage.

The AMA opposed establishing a single reimbursement rate for services provided by skilled nursing facilities and home health agencies and called for further study before eliminating the private room "subsidy."

In conclusion, Dr. Sammons again expressed the AMA's concern about making short-term or piecemeal solutions through the budget process. Referring to the Association's organization of a broad-based study of national health policy, he said, "We expect that the results of this study will suggest major reforms in the government's role in the health care of individual citizens. . . . We hope it will be possible to make the necessary short-term savings and changes now and later more basic long-term changes that will stem from the results of the health policy study."

Impaired Physician Programs

Impaired physician programs may serve as a model for other professions and occupations that seek to deal with members who suffer from alcoholism and other forms of drug dependence, the AMA has told Congress.

William Rial, M.D., AMA President, told a Senate Labor and Human Resources Subcommittee that the medical profession was one of the first professions to confront the fact that some of its members suffered impairments and was the first to take action to deal with the problem.

With the active encouragement of the AMA, medical societies in all states have established programs to attempt early identification and treatment for impaired physicians, Dr. Rial testified.

Dr. Rial was accompanied by LeClair Bissell, M.D., a member of the AMA Panel on Physician Mortality and the AMA Panel on Alcoholism.

The physicians pointed to "a high recovery rate by physicians who undergo treatment as part of the program," in the range of two thirds to three fourths of the participants.

Dr. Rial said that physicians appear to have the same rate of alcoholism as found in the general population and may be "somewhat more susceptible" to drug dependency because of greater accessibility to drugs. "Of the two, alcoholism most likely represents the greater

problem in terms of numbers of physicians affected."

The AMA has been very active in stimulating programs to assist impaired physicians and to encourage appropriate disciplinary actions to protect the public, Dr. Rial said.

AMA Opposes Grant Forgiveness Amendment for HMOs

The AMA has protested a proposed regulation that would allow health maintenance organizations (HMOs) to be forgiven repayment of federal grants despite changing from non-profit to for-profit HMOs.

"To amend these regulations now and allow profit-making entities to take advantage of the public funds received by the not-for-profit HMO is highly inappropriate," the AMA told the Health and Human Services Department.

The regulation would give the HHS Secretary authority to waive all or part of the grant repayment in such cases.

AMA Executive Vice President James Sammons, M.D., wrote that "in light of a projected budget deficit of over \$100 billion in fiscal year 1983, we believe that it would be prudent for the Office of Health Maintenance Organization to insist on fulfillment of financial obligations undertaken by HMOs and recapture grant money given to HMOs by the federal government upon conversion to for-profit status."

The AMA told the HHS Department that "federal government intervention, particularly in the promotion of HMOs, has interfered with the operation of a pluralistic system for consumer choice."

To waive the repayment requirement would be "but another example of preferential treatment being given to HMOs by the federal government," said the AMA.

AMPAC Budgets \$350,000

Independent expenditures for political candidates represent "a basic element for our democracy and should be encouraged and supported," the American Medical Political Action Committee (AMPAC) has told Congress.

Independent expenditures are contributions or activities made on behalf of candidates without the previous knowledge of the candidates and without any consultation with the candidates. In 1976 the Supreme Court held that such expenditures are free of the campaign contribution limitations that apply to other campaign funding.

Michael Levis, M.D., a member of the AMPAC board of directors, told the Task Force on Elections of the House Administration Committee that an independent expenditure is an activity involving the exercise of the right to free speech concerning a political campaign.

Dr. Levis said that AMPAC carries out its program of independent expenditures by articulating support for

a candidate "and we do not choose to campaign against someone we do not support. This is a decision that we made at the start of our independent expenditure activity and is a cornerstone of our policy."

AMPAC has budgeted about \$350,000 for independent expenditures during the 1982 elections. The money will be spent on radio and TV spots and direct mail.

The AMPAC official said tight controls are maintained on such funds to assure that no AMPAC officer has had any communication with the candidates involved.

To date this year, AMPAC has received contributions from some 42,000 people—primarily physician members of the American Medical Association and state medical societies—averaging about \$25 per person. "Thus AMPAC serves as a means by which a large number of small contributors can pool their resources to more effectively participate in the political process," said Dr. Levis.

In 1978, AMPAC spent about \$48,500 on two independent expenditures programs. One involved advertisements in local editions of national magazines; the other, campaign buttons for candidates in ten congressional districts.

During the 1980 elections AMPAC spent \$170,000 for television spots for seven candidates and direct mail for another seven.

Assessing the effectiveness of these programs, Dr. Levis said the magazine ads may have been effective in promoting awareness of the candidates, the campaign buttons may have helped to increase name recognition, and that the direct mail brochure appeared to have the most impact probably influencing the results. Television spots apparently improved the attitude of voters, particularly undecided voters, toward the candidates who were supported.

"It thus appears that carefully planned, positive independent expenditures may increase the chances of election of the candidate who is supported," Dr. Levis said.

Peer Review Subject to Antitrust

Maintaining a hard-line policy on "antitrust and health," the Supreme Court has held (6-3) that peer review panels for health insurance claims evaluation are subject to attack under the federal antitrust laws.

The case at hand involved a New York chiropractor who challenged a chiropractic review panel for Union Labor Life Insurance Co., whose health insurance policies contain some chiropractic benefits. The chiropractor, some of whose claims were disputed by the review panel, brought suit charging that the review group was a vehicle for a conspiracy to fix prices of chiropractors.

The high court's decision, which obviously applies to all such peer review groups including those composed of physicians, centered on the important legal question of whether the activities of these review committees can be considered part of the business of insurance. The majority of the court held that it was not part of the business of insurance, and thus not exempt from the

scope of the federal antitrust laws.

In their dissent, Justices Rehnquist, O'Connor and Chief Justice Burger said "there can be little doubt that today's decision will vastly curtail the peer review process. Few professionals or companies will be willing to expose themselves to possible antitrust liability through such activity."

announcements

CALENDAR OF MEETINGS

NATIONAL

- Oct. 4-5 American College of Nutrition—Hyatt Regency, Crystal City, Va.
- Oct. 4-7 American Academy of Family Physicians—Fairmont Hotel, San Francisco
- Oct. 4-8 American Institute of Ultrasound in Medicine—Curragan Hall & Fairmont Hotel, Denver
- Oct. 6-8 Clinical Orthopaedic Society—Hyatt Regency, Milwaukee
- Oct. 7-10 American Association for Hand Surgery
- Oct. 9-17 International Body Imaging Meeting—Sheraton Royal Waikoloa Hotel, Kona, Hawaii
- Oct. 10-13 American Academy of Neurological Surgery—Ritz-Carlton, Boston
- Oct. 10-15 American College of Chest Physicians—Sheraton Centre Hotel, Toronto
- Oct. 10-15 American Physiological Society—Town & Country, San Diego
- Oct. 10-15 American Society of Maxillofacial Surgeons, Sheraton Waikiki, Honolulu
- Oct. 10-15 American Society of Plastic and Reconstructive Surgeons—Sheraton Waikiki, Honolulu
- Oct. 15-19 International Congress on Tropical Cardiology (in conjunction with the Association of Thoracic and Cardiovascular Surgeons of India)—Bombay, India
- Oct. 16-22 College of Pathologists—Hilton Fontainebleau, Miami Beach
- Oct. 16-23 American Society of Clinical Pathologists—Las Vegas Hilton
- Oct. 17-21 American Academy of Otolaryngology-Head and Neck Surgery—Rivergate, New Orleans
- Oct. 17-21 Medical Group Management Association—Hilton, Las Vegas
- Oct. 20-23 Association of American Physicians and Surgeons—Colony Square, Atlanta
- Oct. 20-24 American Academy of Child Psychiatry—Sheraton, Washington, D.C.
- Oct. 21-23 Society for Adolescent Medicine—New York Sheraton Centre, New York City
- Oct. 21-24 American Academy of Neurological and Orthopaedic Surgeons—Caesar's Palace Hotel, Las Vegas
- Oct. 21-24 American Academy of Psychiatry and the Law—Hotel Roosevelt, New York
- Oct. 22 Sleep Disorders in Children: SIDS—Sleep Apnea Research and Evaluation (sponsored by Long Island Jewish-Hillside Medical Center)—New Hyde Park, NY
- Oct. 22-26 American Association of Oral and Maxillo-

- Oct. 22-26 facial Surgeons—Atlanta Hilton Hotel
- Oct. 22-26 American Society of Anesthesiologists—Hilton, Las Vegas
- Oct. 23-28 American Academy of Pediatrics—New York Hilton, New York City
- Oct. 24-27 American Association for Clinical Immunology and Allergy—Town & Country Hotel, San Diego
- Oct. 24-30 American College of Gastroenterology—Grant Hyatt, New York City
- Oct. 24-31 American Society of Therapeutic Radiologists—Orlando Hyatt House, Orlando
- Oct. 25-26 American Society of Law and Medicine—Hyatt Regency Capitol Hill, Washington, D.C.
- Oct. 26-30 American Medical Writers Association—Biltmore Hotel, Los Angeles
- Oct. 30-Nov. 2 Southern Medical Association—Peachtree Plaza Hotel, Atlanta
- Oct. 31 Association for the Advancement of Psychotherapy—Grand Hyatt, New York City
- Oct. 31-Nov. 5 American Academy of Ophthalmology—San Francisco
- Oct. 31-Nov. 5 American Academy of Physical Medicine and Rehabilitation—Hyatt Regency, Houston
- Oct. 31-Nov. 5 American Congress of Rehabilitation Medicine—Hyatt Regency, Houston
- Nov. 1-4 Interstate Postgraduate Medical Association, 67th Scientific Assembly—Town & Country, San Diego
- Nov. 4-6 American Cancer Society—Waldorf, New York
- Nov. 4-6 Central Society for Clinical Research—Drake Hotel, Chicago
- Nov. 5 Symposium—Next Decade: Changes in Sociological and Economic Status of Physicians (sponsored by South Highlands Hospital, Birmingham)—Hyatt Birmingham
- Nov. 7-10 National Perinatal Association—Fairmont Hotel, Dallas
- Nov. 8-13 American Epilepsy Society—Hilton Hotel, Phoenix
- Nov. 9-13 American College of Preventive Medicine—Montreal
- Nov. 9-13 American Society of Cytology—Hyatt Regency, Chicago
- Nov. 10-14 American Association for Clinical Immunology and Allergy—Anaheim Marriott, Anaheim, Calif.
- Nov. 11-14 Association of Clinical Scientists—Drake Hotel, Chicago
- Nov. 14-18 American Public Health Association—Montreal
- Nov. 15-18 American Heart Association—Dallas
- Nov. 15-18 American Physicians Art Association—New Orleans
- Nov. 17-19 AMA Congress on Occupational Health—University of South Florida, Tampa
- Nov. 19-23 Gerontological Society of America—Sheraton Boston, Boston
- Nov. 28-Dec. 3 Radiological Society of North America—McCormick Place, Chicago

STATE

- Oct. 7-9 Tennessee Society of Internal Medicine and American College of Physicians, Tennessee Region (Annual Meeting)—Knoxville
- Oct. 11-12 Tennessee Valley Medical Assembly—Chattanooga Choo Choo
- Nov. 2-5 Tennessee Academy of Family Physicians—Gatlinburg

TENNESSEE VALLEY MEDICAL ASSEMBLY

(Sponsored by the Chattanooga & Hamilton County Medical Society, Inc.)

CHATTANOOGA CHOO CHOO CENTENNIAL CENTER

October 11-12, 1982

MONDAY, OCTOBER 11, 1982

EMERGENCY ROOM ROUNDS

- 7:30 a.m. Registration
8:15 a.m. Samuel R. Marney, Jr., M.D., Nashville
"BEE STINGS, ASTHMA, AND OTHER ALLERGIC EMERGENCIES"
9:00 a.m. W. Leigh Thompson, M.D., Cleveland, OH
"THE CLINICAL APPROACHES TO POISONING AND OVERDOSES"
9:45 a.m. COFFEE BREAK—Exhibit Visitation
10:15 a.m. Peter H. Stone, M.D., Boston
"THE EMERGENCY ROOM TRIAGE OF CHEST PAIN"
11:00 a.m. Glenn W. Geelhoed, M.D., Washington, DC
"A CLINICAL APPROACH TO SHOCK"
11:45 a.m. Questions and Answers
12:00 noon LUNCHEON
Studio Room, Chattanooga Choo Choo
SPEAKER: John B. Moses, M.D.
Scarsdale, NY
SUBJECT: "MYTHS, MONSTERS, AND MRS. ROOSEVELT"

LABORATORY AND X-RAY ROUNDS

- 1:30 p.m. Arthur C. Fleischer, M.D., Nashville
"CLINICAL USE OF ABDOMINAL ULTRASOUND"
2:15 p.m. Jeff D. Lazar, M.D., Bethesda, MD
"A MORE SELECTIVE OVERVIEW OF PROSTAGLANDINS"
3:00 p.m. COFFEE BREAK—Exhibit Visitation
3:30 p.m. Edward V. Staab, M.D., Chapel Hill, NC
"USES AND MISUSES OF COMPUTERIZED AXIAL TOMOGRAPHY"
4:15 p.m. George Beller, M.D., Charlottesville, VA
"A PRACTICAL APPROACH AND UNDERSTANDING OF NUCLEAR CARDIAC SCANNING"
5:00 p.m. Questions and Answers

TUESDAY, OCTOBER 12, 1982

HOSPITAL ROUNDS

- 7:30 a.m. Registration
8:15 a.m. Charles B. Anderson, M.D., St. Louis
"A CLINICAL APPROACH TO ABDOMINAL TRAUMA"
9:00 a.m. Arnold Schwartz, M.D., Cincinnati
"CALCIUM ANTAGONIST, CLINICAL PHARMACOLOGY & USE"
9:45 a.m. COFFEE BREAK—Exhibit Visitation
10:15 a.m. Talmadge A. Bowden, Jr., M.D., Augusta, GA
"A CLINICAL APPROACH TO UPPER GI BLEEDING"
11:00 a.m. Donald P. Griffith, M.D., Houston
"CLINICAL MANAGEMENT OF RENAL STONES"
11:45 a.m. Questions and Answers
12:00 noon LUNCHEON
Studio Room, Chattanooga Choo Choo
SPEAKER: Robert C. Ricks, Ph.D.
Oak Ridge, TN
SUBJECT: "NUCLEAR WARFARE—MEDICAL ASPECTS"

OFFICE ROUNDS

- 1:30 p.m. Bruce S. Allen, M.D., Augusta GA
"COMMON SKIN LUMPS AND BUMPS IN THE OFFICE"
2:15 p.m. Denis M. O'Day, M.D., Nashville
"THE CLINICAL APPROACH TO THE RED EYE"
3:00 p.m. COFFEE BREAK—Exhibit Visitation
3:30 p.m. Robert J. Malcolm, Jr., M.D., Charleston, SC
"THE CLINICAL APPROACH TO THE OBESE PATIENT"
4:15 p.m. Anthony A. Luciano, M.D., Iowa City
"SECONDARY AMENORRHEA, DIAGNOSIS AND TREATMENT"

Announcing a New, Interactive CME Program for Today's #1 Health Problem Cardiovascular Disease: Risk-Reduction Strategies

Multimedia Seminar:

Up to 2 Credit Hours, Category 1 PRA/AMA

A distinguished panel of authorities confronts the major clinical risk factors in cardiovascular disease management. Filmed case studies help the primary care physician identify and evaluate the patient's "risk profile" and assess cardiovascular treatment.

Self-study Program:

4 Credit Hours, Category 1 PRA/AMA

Follow-up clinical monograph discusses in depth 1) clinical issues and 2) practical strategies. Completion of the monograph and accompanying quiz reinforces the seminar material.

Total Program with Materials— Free of Charge

The program includes: two film segments on 16mm or 3/4" videocassette (on loan), step-by-step Moderator's Guide, Participant Workbooks, Self-study Program and publicity kit—everything needed to present a one- or two-hour seminar with minimal preparation.

For further information

Mail the coupon or call toll-free
800-526-4299.

In New Jersey, call
(201) 636-6600.



Cardiovascular Disease: Risk-Reduction Strategies



M.E.D. Communications
655 Florida Grove Road, Hopelawn, NJ 08861
Please send me full details on faculty, agenda,
accreditation and booking for the CME seminar,
Cardiovascular Disease: Risk-Reduction Strategies.

Name _____
(PLEASE PRINT)

Title _____

Institution _____

Street _____

City _____ State _____ Zip _____

Telephone _____
(AREA CODE)

Cardiovascular Disease: Risk-Reduction Strategies
was produced in collaboration with New York Medical College by
M.E.D. Communications under a grant from Bristol Laboratories,
Division of Bristol-Myers Company.

ME0703 8/82

AMA

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Preventive Medicine	William Schaffner, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

Oct. 6-8	Recent Advances in Blood Banking
Oct. 7-10	Annual Frontiers in Nutrition Seminar (10 hours)
Oct. 15	Pain Management Workshop
Oct. 22-23	Annual Medical Alumni Reunion, Scientific Sessions
Oct. 29	Symposium on Leukemia and Lymphomas (7 hours)
Nov. 4-6	American Society for Microbiology Fall Meeting, Scientific Sessions
Nov. 17-19	Tennessee Public Health Association Annual Meeting, Scientific Sessions
Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.
Chest Disease	Joseph M. Stinson, M.D.
	Paul A. Talley, M.D.
	Edward A. Mays, M.D.
Dermatology	Thomas W. Johnson, M.D.
	David Horowitz, M.D.
Gastroenterology	Ludwald O. P. Perry, M.D.
	Buntwal M. Somayaji, M.D.
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
	Gregory Samaras, M.D.
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
	John C. Ashhurst, M.D.
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
	Ira D. Thompson, M.D.
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

- Oct. 1-2 Child Abuse (cosponsored with LeBonheur's Center for Children in Crisis)
Oct. 29-30 UT College of Medicine Alumni Weekend

Knoxville

- Nov. 6-7 Loss Prevention

World's Fair

- Oct. 13-15 3rd Annual Smoky Mountain Seminar in Obstetrics and Gynecology (K)
Oct. 21-23 Office Ultrasound (K)
Oct. 27-30 Cancer Concepts (K)
(K) Contact the Knoxville office for information.
(M) Contact the Memphis office for information.

For further information about any of these courses, please call the appropriate individuals below:

- Memphis Ms. Jean Taylor Tel. (901) 528-5547
Chattanooga Ms. Jeanne Schmid Tel. (615) 756-3370
Knoxville Ms. Kay Laurent Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

EAST TENNESSEE STATE UNIVERSITY

- Oct. 8 Limb Regeneration
Nov. 12-14 Cardiology in the Aging
Nov. 16-17 Ellis Orthopaedic Lectureship: Total Knee Replacement

For information contact Department of Continuing Medical Education, Box 19660A, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

IN SURROUNDING STATES

UNIVERSITY OF KENTUCKY

- Oct. 31- 13th Family Medicine Review—Session III
Nov. 5

For information contact Frank R. Lemon, M.D., Continuing Education, College of Medicine, University of Kentucky, Lexington, KY 40536, Tel. (606) 233-5161.

UNIVERSITY OF LOUISVILLE

- Nov. 4-5 Infections in the Newborn (16th Annual Newborn Symposium)

For information contact Billy F. Andrews, M.D., Department of Pediatrics, University of Louisville School of Medicine, Louisville, KY 40292, Tel. (502) 588-5753.

OF SPECIAL INTEREST

INT'L. MEDICAL EDUCATION CORP.

- ECG Interpretation and Arrhythmia Management
Oct. 15-16 Sheraton Atlanta
Dec. 3-4 Hilton Plaza Center, Kansas City, Mo.
Oct. 22-23 Hyatt Lincolnwood, Chicago

Ambulatory Electrocardiography: Clinical Applications, Methodology and Interpretation

- Oct. 29-31 Sheraton-Charleston, Charleston, S.C.
Dec. 3-5 Hyatt Regency, Chicago

Clinical Management of Coronary Disease and Dual-Mode Exercise Testing

- Dec. 3-5 Peachtree Plaza, Atlanta

Arrhythmias and Cardiac Ischemia: Diagnosis and Management

- Nov. 5-6 Le Pavillon, New Orleans

Cardiac Rehabilitation

- Nov. 5-6 Hyatt Lincolnwood, Chicago

For information and complete course schedule contact Division of Postgraduate Education, International Medical Education Corporation, 64 Inverness Drive East, Englewood, CO 80112, Tel. (800) 525-8651.

1983 CME Cruise/Conferences on Legal-Medical Issues



**APPROVED FOR
18-24 CME CREDITS
CATEGORY 1**
By the Suffolk Academy
of Medicine

The programs listed below were scheduled prior to 12/31/80 and conform to IRS tax deductibility requirements under Sec. 602 of the Tax Reform Act — Public Law 94-445 effective 1/1/77.

- * January 8-15 (from Ft. Lauderdale, FL)
7 Day Caribbean —
- * April 2-9 (from Los Angeles, CA)
7 Day Mexican Riviera
- * July 2-16 (from San Francisco, CA)
14 day Alaska/Canada
- * July 27-Aug 6 (from Ft. Lauderdale, FL)
10 day Caribbean —
- Aug. 20 — Sept. 3
(from Venice, Italy)
14 day Mediterranean

*FLY ROUNDTRIP FREE

EXCELLENT GROUP FARES — FINEST SHIPS

The number of participants in each conference is limited. Early registration is advised.

For color brochure
and additional
information contact:

International Conferences
189 Lodge Ave.
Huntington Station, N.Y. 11746
Phone (516) 549-0869

Tennessee Medical Association's

Exclusively Approved

**Disability Insurance
&
Major Hospital Insurance
Programs**

Administered By

Smith, Reed, Thompson & Ellis Co.

**P.O. BOX 1280
NASHVILLE, TENNESSEE 37202
PHONE 255-7625**

**Manager
WILLIAM H. ELLIS, C.L.U.**

**Supervisors
ROBERT K. ARMSTRONG
THOMAS G. HENRY, JR.
ROBERT M. GARRIGUES**

***Underwritten*
SINCE THE PROGRAM'S INCEPTION IN 1942**

***By*
Commercial Insurance Company
Newark, New Jersey**

Highlights of the TMA Board of Trustees Meeting

July 11, 1982

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at its regular third quarter meeting in Olive Branch, Miss., on July 11, 1982.

THE BOARD:

Nominating Committee

Established a policy that no member of the Nominating Committee could serve longer than five years.

Impaired Physician Committee

Heard a report from the Impaired Physician Committee that there had been five additional identifications. Three of the physicians were verified as having significant problems and were scheduled to enter treatment programs. The committee heard a report regarding the establishment of a clerkship at UT that would be tied into the TMA Impaired Physician Program. The committee was unanimous in its opinion that this was a vital cog in the overall program and voted to send a letter of endorsement and support to UT in Memphis.

Communications and Public Service Committee

Received a report that the insurance claims processing seminars co-sponsored by TMA with the American Association of Medical Assistants/Tennessee Society and the Nashville Academy of Medicine had been well received and that tentative plans had been made for additional seminars to be held this fall.

Rural Health Committee

Received a report from the Rural Health Committee that the 20th Annual Rural Health Conference will be held at the Milan 4-H Center on Oct. 6, with 400 participants expected.

SVMIC

Received a report that the effect of the 10% credit given for risk management seminar attendance on overall income of State Volunteer Mutual Insurance Company would result in a premium reduction of approximately \$1.5 million. A large attendance is expected for the last 1982 seminar to be held Nov. 7 in Knoxville. It was also reported that video tapes of the seminar held in Memphis were available directly from SVMIC.

Health Systems Agencies Report

Received a report that only three of the health systems agencies in the state are still operational—Upper East, Knoxville, and Nashville, and that their future is uncertain due to funding cutbacks and other federal requirements. Congress has before it a bill that would eliminate the federal mandate for health planning and any penalty provisions for not doing so.

Letter from MDs in Hardin County

Received a letter from the 11 practicing physicians in Hardin County stating they desired to withdraw membership from the West Tennessee Consolidated Medical Assembly and organize their own county society and retain membership in TMA. The Board agreed that the councilor of this district be notified of the situation and be asked to assist in preparing proper documentation for presentation to the next House of Delegates meeting.

Constitution and By-Laws Changes

Agreed that in order to correct the inconsistencies in capitalization and punctuation, and the archaic sentence structure in the current TMA Constitution and By-Laws, the matter should be referred to the Constitution and By-Laws Committee, to be put in the proper form to be presented to the 1983 House of Delegates for adoption.

Request from Aquinas

Endorsed an associate degree program in nursing at Aquinas Junior College.

AMA Meeting and Delegates Report

Heard a report from Dr. Roy Tyrer, who expressed his appreciation to the Board, Tennessee's AMA delegation, and TMA staff for the support provided during his candidacy for the AMA Board of Trustees. He reported to the Board several of the most important items taken up at the AMA meeting in Chicago as well as the outcome of elections.

**Report Re: Medicaid
Demonstration Project**

Heard a report on the three demonstration projects planned by TDPH under the Omnibus Reconciliation Act of 1981. Of particular interest was the Primary Care Clinic proposal for unlimited hospital days through reinsurance purchased with a portion of the capitation fee. The capitation fee will be less than the average Medicaid recipient cost and the clinic will be responsible for all care. There is a medical advisory committee for this project. The other proposal of concern is the Maury County Project patterned after the Wayne County, Mich., Primary Physician Sponsor Plan or "gatekeeper" concept. TMA has been involved in the planning and development of the pilot project.

**Typewriter Discounts
for Membership**

Agreed to offer the availability of a group purchase discount for physicians in the market for buying IBM typewriters. A discount of up to 14% is available if a group purchase of at least 50 typewriters is made.

**Student Education Fund
Loan Requests**

Rejected a request for a \$50,000 line of credit from the TMA-Student Education Fund. The Board suggested that the SEF Board present a resolution to the 1983 House of Delegates requesting an additional increase in annual dues in order to fund the estimated annual requests, and that approval of current loan applications be limited to the amount of the total assessment dollars already approved and collected.

Travel Committee Report

Agreed to sponsor two trips in early 1983, a proposal from INTRAV for an 8-day trip to Jamaica in January and a 16-day trip to South Africa in February.

Financial Statement

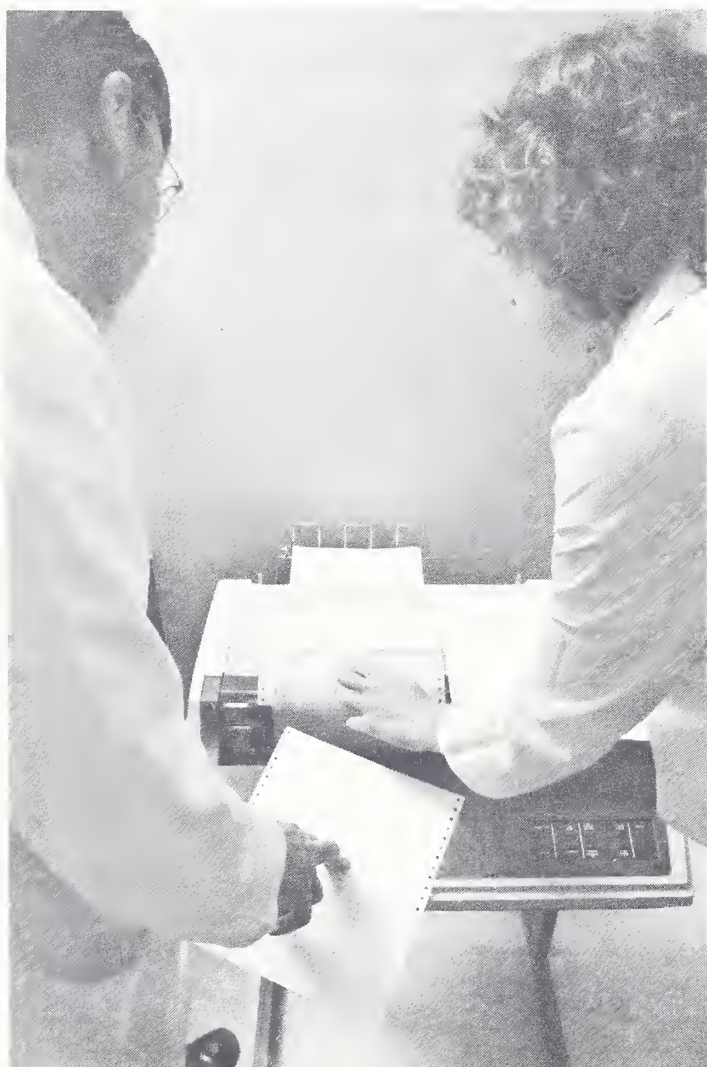
Approved the third quarter financial statement.

**Supreme Court Decision
Re: Peer Review**

Agreed to cease all fee peer review temporarily until more definitive decisions are made regarding what constitutes appropriate peer review activities.

TMA Auxiliary Request

Agreed to contribute \$1,500 to the TMA Auxiliary to assist in its 1982 Christmas Card project designed to increase contributions for AMA-ERF. 



BASMED Takes Care of Your Business So You Can Take Care of Your Patients.

BASMED is good business medicine for your medical practice. By freeing your office from time-wasting drudgework like insurance processing and paper shuffling, BASMED lets you tend to your patients, instead of your office problems.

BASMED applies advanced computer technology directly to all the biggest medical office problems. For example, with Automatic Claims Processing, BASMED talks directly to the computer at Blue Cross/Blue Shield, and gets back claim checks in days instead of weeks. BASMED simplifies and speeds every office routine: appointment scheduling, record keeping, billing, and much more. BASMED also generates a variety of helpful reports on demand, including an aging of outstanding insurance claims.

BASMED makes medical office work so simple, easy and error free, it's no surprise that people call it **living software.™**

Call or write today to see how BASMED can take care of business at your practice.

**AUTHORIZED
DEALER**


**TEXAS INSTRUMENTS
COMPUTER SYSTEMS**



Bob Thornton
Business Application Systems, Inc.
P.O. Box 240246
Memphis, Tennessee 38124
1-800-334-7010

Medicine of the Middle Ages:

ALBERT DITTES, M.D.

Before the fall of Rome the average person was pretty much assured of hope for a reasonably long life and the protection of the law. This system of living which made it possible to live in peace was guaranteed by the leadership of the Roman Empire and the power of the Roman legions.

In about 400 AD Germanic barbarians finally succeeded in destroying the Roman Empire, causing law and order to disappear. This led to a situation where most people in Europe traded their farms and homes for the protection given by the nearest political leader such as a count, duke or baron, as bands of robbers and brigands attacked helpless farmers and their families in their homes. Thus the Dark Ages had their start.

The medieval church slowly and completely gained control not only of individuals but also of kings and countries. For centuries there was conflict between certain kings and the church, but the church usually won because of the threat of excommunication. The church brooked no free thought or new ideas, whether of religion, politics, medicine, or science. This situation led to a complete cessation of experimentation and new thoughts in health and medicine.

The majority of people were illiterate and poor. They lived with their animals in small houses in cities built for military protection and simple business convenience. Public health and sanitary features were not considered in what little city planning there was. Aqueducts that brought fresh water to the cities were built by the Romans, and sewage disposal was known to them, but they were not used in the cities of the Middle Ages.

Although in a small way artisans, merchants and physicians did flourish, the economy of the Middle Ages was feudal, and based on agriculture. Life was short and hard. Nothing was known of microorganisms, much less of malignancies, vitamin deficiencies, or emotional illnesses. The cities were largely composed of wooden houses and planned so badly that fire was an ever-present danger. The city of Rouen, France, burned down at least three times in ten years. Pulmonary tuberculosis was rampant, and epidemics of smallpox killed thousands of people in middle Europe every year, as did scarlet fever, measles, diphtheria, cholera, pneumonia, and the plague.

The houses and towns of these European cities were so constructed that the black rat found reproduction very easy. The bacterial agent of the bubonic plague (*Pasteurella pestis*) was spread by fleas from sick rats to the helpless inhabitants. In one epidemic that lasted from 1347 to 1353, 25 million Europeans died of the plague. In another epidemic in the 17th century the

residents of Oberammergau, Bavaria, promised Jesus Christ that they would celebrate His life, death and resurrection every ten years if He would spare them from the black plague that was heading their way. The Oberammergau Passion Play still exists.

The Sweating Disease killed many people. The affected had fever, sweated badly for a few days, and then died. The cause is unknown.

Because of superstition and ignorance people believed that their lives were controlled by certain stars, planets, and constellations. They believed in the baleful influence of witches, witchcraft, the evil-eye, charms, bracelets and the bezoar stone. They felt that disease was put on them by God as well as the devil. They believed in secret remedies and astrology.

How well did the medical profession stand up to all this? The doctors did the best they could with what information and misinformation they had. There were medical schools in the Middle Ages, those in Salerno (12th century), Montpellier (12th century), Bologna (13th century), and Paris (12th century), the schools that attracted many professors and students. They used texts and writings that were said to be written by Hippocrates (5th century BC) and Galen (2nd century AD) as the basis for their studies, along with the writings of a Roman army doctor (Dioscorides) on the use of various plants and herbs. The texts of the 11th century Arab physicians Avicenna and Rhazes and the writings of the Jewish physician Maimonides were used in their teachings and discussions. Medical students went to medical school for a few years and then lived with a practicing physician for a few more years to gain practical experience in the Middle Ages.

They knew very little about anatomy, because post-mortem examinations and human anatomical dissection were forbidden by both church and state. In fact, Galen assumed the anatomy of dissected monkeys and pigs to be the same as that of human beings when he wrote his great encyclopedia concerning all that was to be known about man and his diseases.

They had much knowledge of the use of herbal remedies, much of it handed down from ancient Egyptians (pomegranates for round worms, liver for night blindness, from the Sumerians (asafetida, etc.), and also from many other early cultures. They used white poppy and willow bark and mandrake for pain, belladonna and henbane as antispasmodic, squill to strengthen weak hearts (now used as a rat poison), meadow saffron (colchicine) for gout, ipecac as an emetic and nuxvomica as a stimulant, as well as hundreds of other herbs, most of them worthless.

They did not know why their drugs worked, having no knowledge of the alkaloids in these herbs, and they

had very little knowledge of physiology and poor knowledge of anatomy. They unwittingly depended on the body's innate ability to heal itself from many conditions (virus diseases, and emotional and certain mental illnesses, among others) and the fact that the doctor himself was good medicine for the sick person.

Each nation had its numerous dedicated physicians who sincerely worked hard in their profession, but because of poor success with such ills as epidemics, infectious diseases, malignancies, and the like, the physician was considered a sort of mechanic. The surgeon opened boils, set broken bones, reduced fractures and dislocations, and did surgery on hernias. He was not held in as high esteem as the physician. The medical profession was considered very inferior to the clergy, as the human body was considered mortal and corruptible and usually could not last much over 70 years, whereas the soul was immortal and would live through eternity.

In the Middle Ages doctors were looked at askance not only for the reasons noted above, but also for reasons of astrology. The medical profession was said to be under the influence of the planet Mars and the constellation Scorpio—both of which had a baleful influence and led to cruelty. It was also under the influence of the planet Venus and the constellation Taurus, both of which led to debauchery and licentiousness.

As the centuries slowly passed, here and there a brilliant man would shine forth. In the early 1500s Vesalius, because of his own anatomical dissections, brought out a better textbook of anatomy, than that of Mondino in the 13th century. Guy de Chauliac in the 13th century became a renowned surgeon largely because of his knowledge of anatomy. A German army doctor, Heinrich Von Pfolspendt, first successfully treated gunshot wounds and removed bullets.

Nicholas Kopernik (Copernicus) in the 15th century was a physician, priest and world renowned astronomer. As was the custom of the time the monastery was used for treating the sick. His astronomical observations were of much greater importance than anything else he did.

The physicians of the Middle Ages were unable to master fundamentals of anatomy, physiology and pharmacology because of limited technology. Microscopes, electricity, x-rays, etc., were not even dreamed of. Also they were prevented by the church from thinking medical thoughts other than those propounded by Hippocrates, Galen and Celsus, but they spent their time pondering the facts and principles put forth by these men.

Hippocrates (400 BC) was a brilliant physician and an astute observer. So great was his reputation that his erroneous concept of the imbalance of humors held sway for about 2,000 years. The four humors were blood, phlegm, black bile, and yellow bile. The imbalance could be restored by physical therapy, manipulations, capping, bleeding, herbs, etc., thus restoring health.

Little did the physicians of the Middle Ages dream of the work of men such as Pasteur, Jenner, Koch and others that would completely revolutionize the practice of medicine.

Route 3, Box 186
Portland, TN 37148

PRACTICE FOR SALE

Solo General Practitioner wishes to sell practice to retire. Lab, x-ray, EKG with treadmill, moist heat, ultrasound. East Tennessee city across from modern hospital. Great profits yearly. My residence in fashionable neighborhood is also for sale.

For information write Ad Box A-1-82, TMA Journal, 112 Louise Ave., Nashville, TN 37203.

GENERAL PHYSICIAN NEEDED

Immediate opening for Board certified, general medical staff physician for accredited developmental center for mentally retarded. Near Smokey Mountains in Greeneville, TN; mild climate year around; large metro shopping area within one hour. Excellent fringe benefits; salary negotiable depending on experience and qualifications; paid professional liability insurance.

Contact G. W. Oden, M.D., Director Medical Services, Greene Valley Developmental Center, Greeneville, TN 37743. Call collect (615) 639-2131, ext. 333.

The State of Tennessee is an Equal Opportunity Employer

RENT MY CONDOMINIUM* AT HILTON HEAD ISLAND SOUTH CAROLINA

For more information contact:

Tom Reed
Attention: Mrs. Parton
117 East Main Street
Murfreesboro, Tennessee 37130
Telephone: (615) 890-6464

**Ocean Front—2 Bedrooms*

SUPPORT YOUR ADVERTISERS

Many of the advertisers in this Journal are long-standing patrons of our monthly publication. Their products and services are of the highest quality available. Don't take them for granted. Read their ads!

Commentary

A Timely Report from Chicago: The 1982 AMA Annual Meeting

JOHN B. THOMISON, M.D.

In the first place, the title to this piece is inaccurate, as this is not a report from Chicago, but one from Nashville about Chicago. In the second place, it is in a sense not timely, as it is about what went on in Chicago last June, and it just gets in under the wire for your consideration prior to the interim meeting in December. On the other hand, it is still timely in that it contains some things you should know and perhaps might not have found out about elsewhere. Lastly, it makes the assumption, possibly erroneous, that you care about what went on in the assembly of the AMA House of Delegates in June. You should, as some of it vitally affects you, your practice, and your future. So much for the introductory digression.

One of the items that will make a notable impact on you is one that I think we should dispose of at the outset; it is that, not surprisingly, in future years it will cost you more money to belong to the AMA. This assumes you will want to, and I sincerely hope that assumption is correct. AMA staff decides how much money it needs to carry out the mandates of the House, and the Board decides how much it absolutely must have and where it is to come from. The budget is discussed in reference committee, and then the whole package is placed back in the lap of the House.

At all levels mention of a dues increase is made in a hushed voice and with trepidation, in the full knowledge that some members could decide that at last the AMA is no longer worth to them what it costs. They decide this because they really have no idea what the AMA is worth to them, but they usually dislike being confused with facts. They simply do not want to part with any more dollars, oblivious of—or perhaps simply ignoring—the fact that the combined dues for all their organizations is a mere pittance when compared to the outlay of labor union members. So when you find your bill increased by \$30 next year, I hope you will consider all those things, as well as what you are about to read (or what I hope you are about to read) about all the AMA is doing for you. It can do those things only if most doctors are members, but it will do them for you whether you are a member or not. If you are not, I hope you feel appropriately cheap.

The big news from Chicago is only a portent of things to come, although it is also big news that such an item was passed by the House at all, even after extended controversy. The big news is that the AMA House approved development of a National Health Policy. Report S of the Board of Trustees, where it is proposed, is deceptively

brief. It says simply that representatives of a variety of professional, business, labor, and insurance organizations will establish the private sector's priorities in health matters, and methods of dealing with them. Basic principles will first be established and a Health Policy Plan elaborated, to be reviewed by AMA Councils and the Board, and ultimately approved by the House of Delegates. Not so simple is the fiscal note, which estimates a total of 50 man-years spent on it over the next two years. It will generate reports for at least the next two years. I'll try to keep you posted.

I have already reported the outcome of the continuing medical education controversy (*J Tenn Med Assoc* 75:560-562, Aug 1982), as it is of more immediate concern to the practicing physician. Of longer term import, however, is the lengthy Report B of the Council on Medical Education (CME), entitled "Future Directions in Medical Education," the comprehensive final report containing 36 recommendations resulting from a two-year effort of six task forces. The major item contained in the report is that after nearly a generation in which, through the excessive use of electives, specialization began as early as the senior year in medical school (to which I think a lot of our present difficulties are traceable), it has become apparent that doctors need to be broadly grounded before becoming super-specialists, since those fields have progressively narrowed. The recommendation approved by the House would reverse this trend by requiring a year of general internship as a transition between medical school and specialty training in any field other than family practice, where broad coverage is already the rule. Another recommendation would also broaden the premedical experience to an expanded liberal arts education, which has progressively constricted since the days of World War II, with the result that physicians need not be, and frequently are not, educated but merely trained persons, to the detriment of the profession.

Since I have already begun discussing matters of medical education, I shall continue discussing related items taken up by Reference Committee C, and turn to the matter of the foreign medical graduate. Over this issue, the House took the bit in its teeth, and against the advice of the Reference Committee approved resolutions with rec-

ommendations which if followed would markedly restrict the flow of foreign medical graduates into the mainstream of medical practice in the United States. The House first rejected the notion, expressed in CME Report D, that it is impossible to evaluate foreign medical schools, and likewise rejected its recommendation that in lieu of this, mechanisms be developed for improving evaluation of clinical and scientific knowledge and skills of such graduates to insure their comparability to those of graduates of U.S. medical schools. While the House accepted this as an interim measure, it instructed the AMA to assist those states, such as Illinois and New York, that are required by statute to evaluate foreign medical schools, and to work toward establishing an accrediting mechanism for foreign medical schools such as there is now for U.S. and Canadian schools through the LCME.

The House also passed Resolution 23, which resolves that it be the position of the American Medical Association that preferential immigration policies for foreign medical graduates should be terminated, and that existing immigration laws be more strictly enforced; it further resolved that reduced requirements for licensure should not under any circumstances be applied to graduates of foreign medical schools. The fear expressed by some that this might lead to legal complications under antitrust statutes was allayed by the EVP, who stated that since the Association has no mechanism for enforcing any such ruling, and could only recommend to governmental agencies, who have the ultimate responsibility, this could not possibly be in restraint of trade. The House made it abundantly clear that it wishes to cease the flow of foreign-born graduates of unapproved medical schools into this country, and to insure that U.S. citizens educated in such institutions demonstrate that they are comparable to graduates of approved U.S. or Canadian medical schools, else the entire accrediting process, and indeed the medical school experience itself, has no meaning, if an unlimited license to practice is dependent solely upon passing an examination.

In the area of continuing medical education, in addition to setting up a mechanism for the establishment of guidelines to accompany the *Essentials* adopted by the ACCME, Report A of the CME, entitled "Restoring Integrity to Continuing Medical Education," and adopted by the House, recommended that the previously adopt-

ed definition be retained, and that continuing medical education should be related directly to professional activities of the physician. State licensing boards should be encouraged to accept for licensure education meeting this definition, and the ACCME and state medical associations should be encouraged when considering a sponsor's continued accreditation to take into consideration any designation as CME programs not qualifying under this definition.

Among other items coming through Reference Committee C and adopted by the House were several resolutions having to do with attempts to assist medical students in obtaining loans, among them a request that the Board of Trustees reconsider its previous policy that the establishment of a new student loan fund is not feasible, and to the federal government to consider reestablishing student aid.

The House adopted Resolution 14, which asked the AMA to oppose any attempts to use the accreditation and certification process in graduate medical education as a means of controlling a number of physicians in any specialty or field of medicine.

Like the TMA House at its meeting last April, the AMA House also expressed concern over the movement in the nursing profession to restrict training to baccalaureate programs. In its Resolution 4, the House resolved that the AMA support all levels of nursing education, including baccalaureate, diploma, associate degree, and practical nursing in order that individuals may be able to choose from a number of alternatives, each of which legitimately fulfills the purpose of meeting the health care needs of the nation. It also affirmed that there is no substitute for bedside teaching and practical training in any education program for nurses.

The matter of satellite emergency clinics, as well as freestanding clinics, received considerable attention and caused extensive debate, particularly as to tax-exempt status of satellite clinics of tax-exempt hospitals in competition with private practitioners of medicine. Opposition to the tax-exempt status of such clinics would have legal implications, in that institutions filling a public need, particularly if they stimulate competition, thereby reducing cost, enjoy protected status, and are not in any sense illegal, nor is there any chance that this status could be reversed, as it is considered in the public interest. The entire matter was referred to the Board of

Trustees, but the Board was instructed to study the impact this is having on the practice of medicine, and to study and report on means that private physicians can legally use to meet this challenge.

There is a trend being established toward closed medical staffs, which is contrary to AMA policy, and the House adopted Substitute Resolution 16, which resolved that AMA reaffirm its support for the principle of open staff privileges for physicians, based on training, experience, and demonstrated competence. As an editorial aside, however, in view of the current FTC policies on restraint of trade among the professions, this policy has little meaning, as it is not possible to exclude individuals from staff membership on such a basis. The AMA is presently under a restraining order from the FTC, upheld by the Supreme Court, barring the AMA from interfering in competition in the practice of medicine. The order is rather sweeping, and will be carried in next month's issue. The AMA is pressing for legislative relief, but until this occurs, the order is binding, and severely restricts any efforts to regulate the practice of medicine, including keeping its own house clean and in order.

The House again addressed the matter of professional liability; in Report FF, the Board of Trustees informed the House that the search for an equitable system to compensate injured parties is part of the Board's continuing investigation of the current situation, and its Report II discloses that the Board has voted to establish an ad hoc committee on medicolegal problems, to be composed of five physician members, for a two-year period. Substitute Resolution 8, adopted by the House, called for the AMA, through an existing permanent council, to conduct an in-depth, ongoing study of direct and indirect cost of professional liability, with annual reports to the House.

The nation's health was addressed through numerous reports, considered by several different reference committees. The remainder of this report will concern itself with that issue. First, to turn to the address of the President, Daniel Cloud, M.D., pointed out that preventable illness, including trauma, accounts for one-half of the total health care expenditures in America. He recommended that the AMA

- reaffirm the Association's past actions pertaining to the health hazards of tobacco, alcohol, accidental injuries, unhealthy life-

- styles, and all forms of preventable illness;
- intensify the Association's leadership in promoting better health for Americans through prevention;
- recognize that preventable illness is a major deterrent to good health that accounts for a major portion of our country's total health care and expenditures;
- actively initiate and support appropriate scientific, educational, and legislative activities that have as their goals prevention of smoking and its associated health hazards; avoidance of alcohol abuse, particularly that which leads to accidental injuries and death; reduction of death and injury from vehicular and other accidents; and encouragement of healthful life-styles and personal living habits;
- strongly emphasize the important opportunity for savings and health care expenditures through prevention.

Substitute Resolution 63, adopted by the House, resolved that the American Medical Association reaffirm its support for the concept of rotational warning on cigarette packages, and Resolution 73 resolved that the AMA support the concept of a federal office of smoking and health within the Department of HHS. In addition to the harm done by the smoking of cigarettes, the House also addressed the matter of fires related to cigarette smoking, and adopted Substitute Resolution 6, which resolved that the AMA, recognizing that self-extinguishing cigarettes are available, continue its support of the concepts calling for a study to determine the feasibility and the practicability of establishing a standard for self-extinguishing cigarettes and requiring cigarette manufacturers to meet that standard; and further, that the AMA inform major cigarette manufacturers of its support of the concept of self-extinguishing cigarettes for the purpose of reducing fire and related deaths, injuries, and loss of property. The resolution also reiterates the opposition of the AMA to all smoking, including that of self-extinguishing cigarettes.

In its Report E, which will be printed subsequently in the *Journal*, the Council on Scientific Affairs (CSA) reported on the findings and recommendations of the study on fetal effects of maternal alcohol abuse, that a woman who drinks heavily during pregnancy places her unborn child at substantial risk, and that no safe level of ma-

ternal use has been established, although opinions differ as to moderate use. The report states that physicians should take an active role in bringing this issue to the attention of pregnant women, and that further studies into the nature and duration of alcohol-related birth defects should be carried out. It further states that public education efforts should be undertaken to inform the public of the problem, and that physicians should take an active part in these campaigns.

The matter of sodium in the diet has come under extensive scrutiny recently in both the medical and lay press. CSA Report G, entitled "Sodium in Processed Foods," is a definitive report on this subject, and will be carried in a subsequent issue of the *Journal*. It describes the activities of the AMA toward persuading food processors to market and label low-sodium foods for general consumption by the public, and to declare sodium content on food labels, both for the use of individuals at risk for hypertension, and for those healthy individuals who wish to keep their daily sodium intake below the national average of approximately 4,800 mg.

Ever since the advent of multichannel chemical analyses, there has been controversy as to the value of testing of healthy individuals, and even the efficacy and cost-effectiveness of the previously widely recommended annual physical examination has been called into question. In its Report D, the CSA supports the concept of periodic medical evaluations of healthy people, stating that the optimum of frequency of evaluation will vary from patient to patient, and that the testing of individuals and population groups should be pursued only when adequate treatment and follow-up can be arranged. It was also pointed out that the physicians need to enhance their skills in patient education and motivation in dealing with long recognized problems, such as hypertension, obesity, anxiety, depression, and the abuse of alcohol, tobacco and other drugs. This entire report will be printed in a subsequent issue of the *Journal*.


On the matter of health education, in its Report CC, in response to Resolution 117(A-80), the Board of Trustees informed the House of the AMA's health education activities, stating that the Department of Health Education has been reorganized to serve as a health information clearinghouse for the public and the profession, to provide consultation to the federation in health

education program development, to provide AMA liaison with other national health education organizations, and to explore and comment on emerging health education problems, issues, and opportunities.

Well, there you have an exceedingly brief resume of some of the things I thought most important in the deliberations of the House at its 1982 Annual Meeting. It differs considerably from the outline prepared by the AMA for its delegates to use in their reports to their constituents, adding some things they left out, and leaving out a great deal of what they put in. The handbook containing all of the material is approximately three inches thick, and the published volume will be approximately an inch thick. Even the brief resume of actions taken by the House runs to 50

printed pages, and *AM News*, which carries some of the deliberations in detail, devoted most of three issues to it. I have simply dwelt on a few things that impressed me, and I thought I would pass them along to you.

It would do you good to attend a meeting of the House if you never have. Although the floor is open only to delegates, there is an ample gallery for seating any interested AMA member, or anyone else, for that matter, with a legitimate interest, who takes the trouble to register. In addition, any member or registered guest has the privilege of the floor in any reference committee meeting, so that if you have a pet peeve or project, it can be aired in that forum. The next meeting is in Miami the second week in December, and following that, next June in Chicago.

Don't say you weren't invited. 

APRIL 1983						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NOTES					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
TMA 148TH ANNUAL MEETING Opryland Hotel—Nashville						
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Candidates for nutritional therapy..

10,000,000

alcoholics. Ethanol may produce many effects that together bring about nutritional deficiencies, so that alcoholism affects nutrition at many levels.¹

25,500,000 geriatric

patients. The older patient may have some disorder or socioeconomic problem that can undermine good nutrition.²

23,500,000 surgical

patients. Nutritional status can be compromised by the trauma of surgery; and some operations interfere with the ingestion, digestion and absorption of food.³



Before prescribing, please consult complete product information, a summary of which follows:

Each Berocea® Plus tablet contains 5000 IU vitamin A (as vitamin A acetate), 30 IU vitamin E (as *dl*-alpha tocopheryl acetate), 500 mg vitamin C (ascorbic acid), 20 mg vitamin B₁ (as thiamine mononitrate), 20 mg vitamin B₂ (riboflavin), 100 mg niacin (as niacinamide), 25 mg vitamin B₆ (as pyridoxine HCl), 0.15 mg biotin, 25 mg pantothenic acid (as calcium pantothenate), 0.8 mg folic acid, 50 mcg vitamin B₁₂ (cyanocobalamin), 27 mg iron (as ferrous fumarate), 0.1 mg chromium (as chromium nitrate), 50 mg magnesium (as magnesium oxide), 5 mg manganese (as manganese dioxide), 3 mg copper (as cupric oxide), 22.5 mg zinc (as zinc oxide).

Indications: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.

Contraindications: Hypersensitivity to any component.

Warnings: Not for pernicious anemia or other megaloblastic anemias where vitamin B₁₂ is deficient. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with vitamin B₁₂ deficiency who receive supplemental folic acid and who are inade-

quately treated with B₁₂.

Precautions: *General:* Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. *Information for the Patient:* Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. *Drug and Treatment Interactions:* As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.

Adverse Reactions: Adverse reactions have been reported with specific vitamins and

1,000,000 hospital patients with infections.⁴ Many are anorectic and may have a markedly reduced food intake. Supplements are often provided as a prudent measure because the vitamin status of critically ill patients cannot be readily determined.³

The incalculable millions on calorie-reduced diets. Patients ingesting 1000 or fewer calories per day could be at high risk because this intake may not supply most nutrients in adequate amounts without supplementation.⁵



Berocca Plus

A balanced formula for prophylactic or therapeutic nutritional supplementation.

Berocca Plus Tablets provide: therapeutic levels of ascorbic acid and B-complex vitamins; supplemental levels of biotin, vitamins A and E, and five important minerals (iron, chromium, manganese, copper and zinc); plus magnesium. Berocca Plus is not intended for the treatment of specific vitamin and/or mineral deficiencies.

Berocca Plus,

highly acceptable to patients, has virtually no odor or aftertaste and is economical. And its "Rx only" status means more physician involvement, better patient compliance.

References: 1. Shaw S, Lieber CS: Nutrition and alcoholism, chap. 40, in *Modern Nutrition in Health and Disease*, edited by Goodhart RS, Shils ME. Philadelphia, Lea & Febiger, 1980, pp. 1220, 1237. 2. Watkin DM: Nutrition for the aging and the aged, chap. 28, in *Modern Nutrition in Health and Disease*, op. cit., p. 781. 3. Shils ME, Randall HT: Diet and nutrition in the care of the surgical patient, chap. 36, in *Modern Nutrition in Health and Disease*, op. cit., pp. 1084, 1089, 1114. 4. Dixon RE: *Ann Intern Med* 89 (Part 2): 749-753, Nov 1978. 5. Committee on Dietary Allowances, National Research Council: Recommended Dietary Allowances, ed 9. Washington, National Academy of Sciences, 1980, p. 13.

minerals, but generally at levels substantially higher than those in Berocca Plus. However, allergic and idiosyncratic reactions are possible at lower levels. Iron, even at the usual recommended levels, has been associated with gastrointestinal intolerance in some patients.
Dosage and Administration: Usual adult dosage: one tablet daily. Not recommended for children. Available on prescription only.
How Supplied: Golden yellow, capsule-shaped tablets—bottles of 100.

candidates for

Rx ONLY **Berocca® Plus** TABLETS

THE MULTIVITAMIN/MINERAL FORMULATION

Noninvasive Assessment of Carotid Circulation

JOHN S. WARNER, M.D.

Approximately one third of all strokes are caused by carotid stenosis or emboli arising from a plaque or ulcer in the region of the carotid bifurcation. It is generally agreed that carotid endarterectomy, when performed by a skilled surgeon, can reduce the risk of stroke. In this paper, however, treatment of carotid artery disease, including the relative value of surgery vs. anticoagulant therapy for the management of specific carotid problems such as the asymptomatic stenosis, will not be discussed. Discussion will be confined to the assessment of the carotid circulation.

If carotid arteriograms were inexpensive and free of complications, there would be no need for the noninvasive test to detect carotid disorders. There is though a very real risk of morbidity and death from angiograms, both by the direct and even the intravenous route, and both types of angiogram may give false-negative results. Throughout the past 30 years, and particularly during the past decade, there has been a search for an accurate, safe, and relatively inexpensive means of detecting carotid artery disease. As of now there is no single perfect test or combination of tests, and further methods of testing carotid circulation will no doubt be proposed during the current decade.

Multiple noninvasive tests have been developed. In setting up a noninvasive laboratory, one needs to select the test or combination of tests that is the most accurate when compared to the arteriogram or the pathologic specimen, and is easily performed by a skilled technician. I wish to emphasize the necessity of having a technician who understands the anatomy, physiology, and pathology of carotid disease, as well as the technique that might be selected. Anyone in the po-

sition of ordering noninvasive tests from any laboratory should be familiar with the types of noninvasive tests that will be performed and their limitations, and should also know how those tests correlate with angiograms.

Ackerman¹ has divided the noninvasive tests into those that directly study the carotid and those that indirectly evaluate the carotid by assessing the distal circulation to the orbit or brain. Table 1 lists those studies that indirectly assess carotid flow. Carotid flow must be reduced approximately 80% before distal perfusion drops. Thus, these indirect studies frequently fail to detect patients with mild or moderate stenosis that might be associated with an ulcerative plaque.

Now to briefly comment on some of these tests.

Compression of a carotid during an EEG has caused strokes, and this procedure was never popular. Radioisotopic flow studies are frequently abnormal in the patient shown by angiogram to have normal carotids. Foo and Hendrickson² report that the radioisotopic flow studies were normal in 47% of their patients who were shown to have carotid stenosis or occlusion on the arteriogram. Thus there are frequent false-positive and false-negative results with radioisotopic flow studies.

The periorbital Doppler studies, as developed by Brochenbrough³ and Barnes,⁴ are performed with compression of the temporal artery, facial artery, and carotid artery. Our laboratory routinely performs the periorbital Doppler study, omitting the carotid compression. Ackerman¹ states that 0.5% of abnormal ophthalmic Doppler studies are due to problems in the ophthalmic rather than the carotid artery, and I have had one recent false-positive periorbital flow study at the Baptist Hospital laboratory.

Oculoplethysmography (OPG) is an accurate means of detecting carotid stenosis or occlusion, and is used in many laboratories. There are two types of OPG. The first, the method of Gee,⁵

From the Department of Neurology, Vanderbilt Medical Center, and the Neurodiagnostic Laboratory, Baptist Hospital, Nashville. Presented at Grand Rounds at Vanderbilt Medical Center.

Reprint requests to 526 Mid-State Medical Center, Nashville, TN 37203 (Dr. Warner).

TABLE 1

NONINVASIVE INDIRECT TESTS OF CAROTID CIRCULATION*

Fundiscopic examination for emboli
EEG with carotid compression
Radionuclear flow studies
Palpation of facial pulses
Thermography
Periorbital Doppler flow
Ophthalmodynamometry
Arm to retina circulation time
Oculoplethysmography
Opacity pulse propagation time
Carotid compression tonography

*Adapted from Ackerman.¹

measures the systolic ophthalmic artery pressure, and the other, the method of Kartchner and McRae,⁶ monitors the arrival time of the ocular pulse wave. I have not had personal experience with either of these tests. Apparently the Kartchner and McRae method is the more widely used. Sumner,⁷ from Southern Illinois University, used the Kartchner method in studying 200 carotids, and found (when calling 40% or greater stenosis as abnormal) that false-negative results occurred 17% of the time, and false-positive results were recorded 33% of the time. He did not mention how often the test was not interpretable. Ackerman¹ reported that the Kartchner and McRae OPG was not interpretable in 10% to 20% of the patients, was frequently misleading when there was bilateral disease, and was often prone to technical artifacts. Apparently similar results have been obtained when using the Gee method of OPG.

The last test listed on this table—carotid compression tonography—measures the pattern of return of the pulse tracing after carotid compression. This was proposed by Cohen⁸ in 1975, and apparently has not been heard from since that time. I personally hesitate to use any test that necessitates carotid compression.

Table 2 lists the tests that directly examine the carotid. This list changes almost yearly, and any current neurology journal contains advertisements for several of these tests.

Palpation of the carotids low in the neck is a valuable means of detecting occlusion of the common carotid, and is used routinely at the Baptist Hospital laboratory, along with palpation of the superficial temporal artery. By palpation it is impossible to distinguish the internal carotid

from the external carotid high in the neck. In the distant past it was stated that the internal carotid could be palpated beneath the tonsil, but this never proved popular.

Auscultation for a carotid bruit is part of a routine physical examination, but frequently gives false or misleading results. A bruit may occur with only minimal turbulence and no stenosis, or it may arise from the origin of the external carotid, where it is of no clinical significance. We frequently encounter patients who have 70%, 80%, or 90% stenosis of a carotid bifurcation without a bruit, and you would of course expect no bruits in the totally occluded internal carotid. Ackerman¹ reports that one third of the patients with severe carotid disease have no bruit. A change in the character of a bruit over a period of time, such as a soft, low-pitched systolic bruit later becoming a louder, high-pitched systolic bruit, usually indicates that a greater degree of stenosis has developed. If a bruit high in the neck has a prolonged diastolic component, or is accompanied by a palpable thrill, it almost always indicates an 80% or greater stenosis of the distal common carotid or proximal internal carotid. Likewise, an orbital bruit (as opposed to a venous hum heard over the orbit) almost always indicates significant stenosis of the distal internal carotid. Although auscultation for a bruit does not always identify the patient with hemodynamic stenosis, auscultation will identify the patient who is at greater risk of having carotid disease, and should continue to be a part of any routine examination.

Soft tissue x-rays of the neck occasionally reveal calcification in a plaque, but this is not always present, and provides no information regarding the degree of stenosis.

Phonoangiograms are of two types. The first is that of Kartchner and McRae,⁹ which exam-

TABLE 2

NONINVASIVE DIRECT TESTS OF CAROTID CIRCULATION*

Palpation of carotid arteries
Auscultation for bruit
Soft tissue x-rays
Phonoangiography
Radionuclear angiography
Real time B-mode scanning
Pulsed wave Doppler
Continuous wave Doppler

*Adapted from Ackerman.¹

ined the intensity-to-time relationship. Sumner⁷ states that false-negative results were obtained in 22% of the patients, and false-positive results in 43% of the patients when using the Kartchner-McRae phonoangiogram. The Lees-Duncan-Kistler¹⁰ phonoangiogram examines the relationship of intensity to frequency of a bruit, and derives accurate numerical estimates of the residual lumen diameter. In a personal communication, J. P. Kistler, M.D., reports difficulty in telling whether a bruit arises from the internal or external carotid, and states that his phonoangiographic technique is not helpful in analyzing orbital or supraclavicular bruits, and cannot distinguish a supraclavicular from a vertebral artery bruit. Only rarely will a bruit be detected sufficiently to be analyzed on the phonoangiogram when it cannot be heard with the stethoscope. Kistler reports that the phonoangiogram is most helpful when there is a residual lumen diameter of between 1 and 3 mm, or approximately 75% to 90% stenosis. When there is less than 1 mm residual lumen, Kistler relies more on the OPG. I have not had personal experience with either of the phonoangiograms, since as you will see later my results with the Dopscan prove it to be a satisfactory alternative. Direct radionuclide flow studies of the carotid in the neck have apparently been attempted in the past, but are seldom used today.

Next, we turn our attention to ultrasonic studies of the carotids. Real time ultrasound permits visualization of both the lumen and the wall of the artery, and provides a means of identifying the early plaque, the calcified plaque, and the plaque that is producing stenosis or occlusion. I have had personal contact with eight different real time scanners, namely Narco, Highstoy, Toshiba, ADP, HRL, Biosound, Sonometrics, and ATL. The ATL incorporates real time and Doppler in one scanning arm, but is not a true duplex machine, since the operator does not study the image and the Doppler flow simultaneously. I am told that Biosound is in the process of incorporating a Doppler into their real time, and two or three of the manufacturers are in the process of bringing out a real time imaging system to be used with their existing Doppler machines. The price of the real time machines listed above varies from \$25,000 to approximately \$130,000. The least expensive provides reasonable visualization of the near and far wall of the imaged vessel, but poor

resolution of the side walls. Several manufacturers claim the ability to demonstrate an ulcerative plaque or even a fibrin clot within an ulcerative plaque. Neurologists in other laboratories who have purchased these machines report that the success in demonstrating the ulcerative plaque is not as great as the manufacturer would lead one to believe. Almost all of the manufacturers introduced these machines to scan larger areas of the body, such as the abdomen, and they are having difficulty in getting proper resolution from a small-parts scanning arm that can be used for the study of carotids. I have had four of these machines on trial at our laboratory, and none has proved satisfactory.

In addition to the technical and economic limitations listed above, there are other more important limitations with real time imaging. The scanning arm is directed at right angles to the vessel and cannot image above the lower edge of the mandible. Many patients have anatomically high bifurcations in the neck, and J. Raines, M.D., from the Miami Heart Institute (using the Biosound), has reported that in one third of his patients he cannot identify the internal carotid, which of course is the most common site for carotid stenosis (personal communication). When used by itself, the real time provides no indication of disease in the distal internal carotid. None of the machines has proven helpful in evaluating abnormalities of the vertebral or subclavian circulation.

The real time ultrasonic waves can be absorbed by calcified plaques, causing the image of the vessel to be obscured at the point of stenosis. Freshly clotted blood may have the same acoustical impedance as moving blood, and thus it is sometimes difficult to distinguish by real time the totally occluded from the normal vessel. Some of the reports on real time indicate difficulty in consistently differentiating the virtual from the complete occlusion, a distinction that can be of major clinical importance. To summarize these comments about real time imaging, I will say that the technique by itself has major limitations, and the scanners currently available are expensive and give poor quality images. Improved systems will be available in the not-too-distant future.

Next we will turn our attention to the ultrasonic techniques that employ the Doppler principle. You can think of this as a fancy flow meter that can be used to detect localized areas of more rapid flow or turbulent flow in a vessel. When an

ultrasonic wave at a frequency of 4 to 10 million Hz is reflected from a moving red blood cell, the wave returns at a different frequency. The resulting shift in frequency correlates with the velocity of flow. The direction of the shift in relation to the probe indicates the direction of flow, and the pulsating quality of the shift will indicate whether the flow is arterial or venous. By using a simple hand-held continuous wave Doppler, a skilled technician can detect and quantitate localized areas of stenosis, and often can distinguish the external carotid from the internal carotid or common carotid. As an accurate screen for carotid stenosis or plaque, many centers in Europe use only a hand-held probe combined with a spectral analyzer. In the mid-1970s Hokanson¹¹ and Spencer¹² modified this technique by placing the probe in a scanning arm, the movement of which was displayed on an oscilloscope, providing an image of the common carotid, external carotid, and internal carotid arteries.

There are two types of imaging Dopplers for the study of carotid disease, one using a continuous ultrasonic emission, and the other a pulsed emission. With the pulsed Doppler, developed by Hokanson,¹¹ the flow is determined at different depths across the lumen of the vessel. In theory this permits improved separation of the external from the internal carotid flow when the vessels are in the same plane. This puts a greater burden, though, on the technician to record the maximum flow signal. The manufacturer of the Hokanson Doppler claims one should be able to see a defect in the Doppler flow map that would correspond to the stenotic plaque. The laboratories that use the machine, though, claim they cannot rely on the image alone, and put greater reliance on the audio Doppler signals. Recently spectral analyzers have been combined with the Hokanson Doppler. I have not yet seen any published results comparing the combined Hokanson Doppler and spectral analyzer to arteriograms.

There are two Doppler systems that utilize a continuous wave or non-pulsed ultrasonic output. The first of these was developed by Spencer¹² and marketed under the name Dopscan. With the Spencer technique the interpretation of stenosis was made totally on the audio signal, listening for the increased pitch at the site of stenosis, and for evidence of turbulent flow on either side of the plaque or in the non-stenotic plaque. Hileman later developed a spectral analyzer for use with the Dopscan, and recently manufactured

Dopscans incorporate this spectral analyzer into a single unit. This has made the Dopscan more objective and easier to interpret, and has made the diagnosis of the non-stenotic plaque more accurate. In February 1978 Baptist Hospital purchased a Dopscan, the first Tennessee hospital to acquire an imaging Doppler system. Since that time the Baptist Hospital laboratory has used the Dopscan on over 5,000 patients, and later I will present the results of our most recent comparison of Dopscan to x-ray.

The other type of continuous wave imaging Doppler system was developed by Curry and White¹³ and sold under the trade name Echoflow. This machine incorporates a frequency analyzer which is displayed on the image, the areas of stenosis appearing as yellow or blue, and the non-stenotic portion of the vessel appearing as red. With the Echoflow machine one can record the direction of flow of the superficial periorbital vessels, both with and without the compression of the superficial temporal and facial vessels. The technician hears the Doppler signals, but usually no permanent record of these is made. Without studying the Doppler signals, the interpreter might see two branches of the external carotid and erroneously consider one of these to be an internal carotid when in fact the internal carotid is totally occluded.

Johnston et al¹⁴ from Toronto report the results of 28 patients whose studies by Echoflow were compared to carotid arteriograms. In their report, when they called any stenosis of the common carotid or internal carotid of 50% or greater as being positive, there were 20% false-negatives, and 26% false-positives using Echoflow. This equates to a specificity of 71%, a sensitivity of 82%, and an overall accuracy of only 77%. In that series two of the ten totally occluded inter-

TABLE 3
COMPARISON OF DOPSCAN RESULTS TO ARTERIOGRAMS
BAPTIST HOSPITAL, NASHVILLE, TENNESSEE
MAY 1980 TO JANUARY 1982*

250 carotids reported as less than 50% stenosis by Dopscan
238 (95.2%) non-stenotic on x-ray
10 (4%) 50%-70% stenosis on x-ray
2 (.8%) over 70% stenosis on x-ray**
231 carotids reported as 50% or greater stenosis by Dopscan
204 (88.3%) over 50% stenosis on x-ray
27 (11.7%) non-stenotic on x-ray
39 carotids reported as indeterminate by Dopscan analysis

*265 patients had both studies; 520 carotids for comparison.
**One 80% and one complete stenosis.

nal carotids were normal by Echoflow. They made no mention of indeterminate studies. By adding a real time analysis to the Echoflow, their sensitivity was 80% and specificity 90%. They did not give data to permit the calculation of false-positive and false-negative when the spectral analysis was added.

Table 3 lists the results from the use of Dopscan at the Baptist Hospital laboratory. During the 20-month interval that spectral analysis has been used, Dopscans were ordered on over 1,700 patients; 265 of these patients also had arteriograms at Baptist Hospital. The arteriograms were usually requested because of the abnormal Dopscan report, and at times were requested on patients who had a normal or indeterminate Doppler and symptoms suggesting vascular disorders. In 3% of the arteries studied by Doppler, the results were indeterminate. These patients are more likely to have an arteriogram, thus explaining why 39 of the arteries compared in the study were listed as indeterminate by Dopscan. Not every patient had a bilateral arteriogram. Of the 520 arteries available for comparison 250 were reported on Doppler as showing less than 50% stenosis. Of these 250 arteries, 12 had stenosis of over 50% on the arteriogram, a false-negative rate of 4.8%. Only two arteries were severely stenosed or totally occluded. In the one patient who had 80% stenosis, the Dopscan was reviewed and failed to show the stenosis. There was only one patient whose internal carotid was thought normal on Dopscan but was shown to be totally occluded on x-ray. On later review of the Dopscan it was thought the study should have been read as indeterminate. Thus this was the fault of the interpretation and not of the technique itself. There is an 11.7% incidence of false-positive Dopscans, most of these being reported as 50% to 70% stenosis on Dopscan and showing only plaque with less than 50% stenosis on x-ray. Most of these patients had symptoms of carotid disease, and would have had an arteriogram if the Doppler were not available.

The Dopscan has been widely accepted by the Baptist Hospital medical staff as an accurate screen for carotid stenosis. We often see a patient with carotid symptoms and a negative Doppler and send the patient home on antiplatelet therapy without obtaining an arteriogram. If their symptoms should continue despite the antiplatelet therapy, then arteriography should be per-

formed. Two such patients were later shown to have glioblastomas as the cause of their cerebral symptoms.

There are limitations with the use of any Doppler technique. Critics have repeatedly pointed out that none of the Dopplers can demonstrate an ulcerative plaque. In my opinion though, this is of no clinical importance, since there is no proof that the patient with the non-stenosing ulcerative plaque is better treated surgically than by the use of antiplatelet agents. Critics have also stated that the Doppler cannot distinguish the totally occluded vessel from the vessel with only a minimal lumen and a trickle of flow. This is clinically important, since the latter patient should have an endarterectomy. I therefore report that a vessel is totally or almost totally occluded, and recommend that any such vessel be arteriogrammed.


With the Doppler there is often difficulty in demonstrating vertebral flow and showing the presence or absence of vertebral steal. In general, any patient with a significant difference in blood pressure between the two arms or abnormal brachial or subclavian Doppler signals should have an arch-aortogram. Because of its depth, there are no means of imaging the subclavian artery. As stated above, scans on 3% of the vessels studied at the Baptist Hospital laboratory cannot be interpreted, and are classified as indeterminate.

In the past, each of the noninvasive tests has been compared to the arteriogram, but there has been no large series comparing the arteriogram to the surgical specimen. Any vascular surgeon can cite examples of where the arteriogram failed to show the full extent of the lesion. In one recent report comparing real time imaging and arteriograms to the actual pathology at surgery in 32 arteries, the arteriogram underestimated the degree of stenosis in 28%, and failed to demonstrate the stenosis in 12%.¹⁵ We have had instances where a Dopscan showed tight stenosis and an arteriogram was initially reported as normal. Only after subtraction studies were made on the arteriogram was the stenosis demonstrated.

It is difficult from the literature to compare one noninvasive technique with the next, since some of the articles deal only with stenosis in the region of the bifurcation, and fail to consider the occasional proximal common carotid or distal internal carotid which can have equal clinical importance. Some articles report either specificity,

sensitivity, accuracy, false-negative, or false-positive results. Each of these is different. I consider the false-negative to be the most important, namely, how often a vessel that is reported to be non-stenotic is shown by subsequent arteriogram or surgery to be stenotic.

The intravenous digital arteriogram has recently been placed on the market, and Vanderbilt Medical Center has the only such machine in Nashville. This of course is an invasive technique, and carries at least the same risks as the intravenous pyelogram, which is accompanied by a significant reaction in about one patient out of every 500, and a death in approximately one patient out of every 50,000. In a personal communication, W. D. Turnipseed, M.D., from Wisconsin, has reported that in approximately 25% of the patients the intravenous digital angiogram fails to show ulcerations in the non-stenotic plaque, and that it fails to show the distal branches of the circle of Willis. Turnipseed reported one false-negative intravenous angiogram in a patient having tight stenosis on the Doppler and a normal intravenous digital study. The conventional arteriogram on this patient showed a web stenosis of the carotid. In most centers, surgery is not performed on the intravenous digital alone, and the lesion must be confirmed by the conventional arteriogram.

In closing I will again state that there are numerous noninvasive methods of searching for carotid problems. Proper combinations of these techniques can give a quite accurate assessment of the degree of carotid stenosis, and even the presence of the non-stenotic plaque. 

REFERENCES

1. Ackerman RH: A perspective on noninvasive diagnosis of carotid disease. *Neurology* 28:615-622, 1979.
2. Foo D, Hendrickson L: Radionuclide cerebral blood flow and carotid angiogram: Correlation in internal carotid artery disease. *Stroke* 8:39-43, 1977.
3. Brockenbrough EC: The periorbital collateral arteries, in Cerebrovascular Evaluation with Doppler Ultrasound, Spencer MP, Reid JM (eds): *Developments in Cardiovascular Medicine*, vol. 6. The Hague, Martinus Nijhoff Publishers, 1981, pp 143-156.
4. Barnes R, Garret W, Slaymaker E, et al: Doppler ultrasound and supraorbital photoplethysmography for noninvasive screening of carotid occlusive disease. *Am J Surg* 134: 183-186, 1977.
5. Gee W, Oller D, Wylie E: Noninvasive diagnosis of carotid occlusion by ocular pneumoplethysmography. *Stroke* 7:18-21, 1976.
6. Kartchner M, McRae L: Noninvasive evaluation and management of the "asymptomatic" carotid bruit. *Surgery* 82:840-847, 1977.
7. Sumner DS, Russell JB, Ramsey DE, et al: Noninvasive diagnosis of extracranial carotid arterial disease. *Arch Surg* 114:1222-1229, 1979.
8. Cohen D, Wangelin R, Trotta C, et al: Carotid compression tonography: Correlation with bilateral carotid arteriography in the diagnosis of extracranial carotid occlusive disease. *Stroke* 6:257-262, 1975.
9. Kartchner M, McRae L, Morrison F: Noninvasive detection and evaluation of carotid occlusive disease. *Arch Surg* 106:528-535, 1973.
10. Kistler JP, Lees RS, Miller MB, et al: Correlation of spectral phonangiography and carotid angiography with gross pathology in carotid stenosis. *N Engl J Med* 305:417-419, 1981.
11. Hokanson DE, Mozersky DJ, Sumner DS, et al: Ultrasonic arteriography. A noninvasive method of arterial visualization. *Radiology* 102:435-436, 1972.
12. Spencer M, Reid J, Davis D, et al: Cervical carotid imaging with a continuous-wave Doppler flowmeter. *Stroke* 5:145-154, 1974.
13. Curry GR, White DN: Colour coded differential velocity carotid bifurcation tomographic scanner. 11th Int Conf Med and Biol Engng, 1976.
14. Johnston KW, deMoralis D, Kassam M, et al: Cerebrovascular assessment using a Doppler carotid scanner and real-time frequency analysis. *J Clin Ultrasound* 9:443-449, 1981.
15. Johnson JM: Angiography and ultrasound in diagnosis of carotid artery disease: A comparison. *Contp Surg* 20:79-93, 1982.

AMACO

The American Medical Assurance Company, the AMA's wholly owned medical liability reinsurance facility, closed its sixth year of operations on Dec. 31, 1981 showing a steady growth pattern in keeping with the Company's fiscal history. Following the 1975 directive of the AMA House of Delegates, AMACO continues to specialize as a supporting reinsurer for physician owned/medical society created medical liability insurance companies. Today AMACO is a supporting reinsurance underwriter for more than 50,000 practicing physicians. During 1981 annual premium volume increased 30% from \$4,600,000 to \$5,900,000. Assets increased 26% to \$25,845,000. The Company continues to follow strict, conservative underwriting guidelines to assure both growth and fiscal integrity. AMACO's business policy is geared to stability and long-term support of medical liability insurance programs. Every effort will be made during the years ahead to strengthen AMACO's insurance capacity and expand the Company's capabilities to be of even greater service to the medical profession.

Limitations of the Computed Tomographic Scan In the Diagnosis of Subdural Empyema

LARRY M. BADDOUR, M.D.

Introduction

Subdural empyema accounts for 15% to 35% of all localized intracerebral bacterial infections¹ and is associated with a mortality rate of approximately 33%.^{1,2} Because optimal therapy of this disorder requires prompt surgical intervention, rapid and anatomically precise diagnosis is critical. Computed tomographic (CT) scan, with its detailed images of intracerebral anatomy, would seem to offer a dramatic advance in making such a diagnosis. Indeed, reviews of the role of CT in diagnosing cerebral infections often state that the CT is an excellent method for diagnosis of subdural empyema.^{3,4}

Recently, this assumption has been called into question.⁵⁻⁸ We report here a case of subdural empyema in which a CT scan performed during the acute phase of the illness failed to delineate the intracranial lesion.

Report of a Case

A 19-year-old man came to the City of Memphis Hospital emergency room with a two-week history of purulent cough, neck pains, and fever. Five days earlier a physician had prescribed ampicillin, 500 mg four times a day orally, after which his cough improved, but his headaches and neck pain worsened. On the day of admission, his temperature was 39.7°C. He denied rash, seizures, abdominal pain, or genitourinary complaints, and had no relevant prior medical history. He did not use tobacco, ethanol, or illegal drugs. On physical examination, he was lethargic and disoriented, with an oral temperature of 38.1°C and a mild ptosis of the right eyelid. Extraocular movements, pupillary reactions, and funduscopic examination were normal. Nasal mucus membranes were congested. Brudzinski's and Kernig's signs were present.

Cerebrospinal fluid (CSF) obtained prior to CT scanning revealed an opening pressure of 420 mm H₂O, with red blood

cells 43/cu mm and white blood cells 125/cu mm with 43% monocytes and 57% polymorphonuclear leukocytes. Gram stain was negative for organisms; CSF glucose was 61 mg/dl (peripheral blood glucose 113 mg/dl), and total protein was 68 mg/dl. Sinus films showed hazy opacification of the right frontal sinus.

A CT scan with 10 ml cuts was performed using an Ohio Nuclear Delta Scan manufactured in 1976. Iothalamate meglumine (Conrag-30), 300 ml of a 30% solution, was used for contrast. There was a mass effect with a shift of midline structures to the left, but no areas of increased or decreased attenuation (Fig. 1), and there was no enhancement. Cerebral arteriography showed displacement of the right middle cerebral branches from the inner bony table consistent with subdural empyema (Fig. 2).

The patient subsequently underwent emergency burr-hole placement in the right frontal bone with evacuation of purulent material yielding *Staphylococcus aureus* and *Haemophilus influenzae* on culture. He later required an additional burr-hole placement and finally open craniotomy to completely drain the empyema. Subsequent CT examinations were of poor quality due to the patient's motion. At the time of discharge, the patient's only neurological deficit was a mild left upper extremity weakness.

Comment

As can be seen in Figure 1, a mass effect was appreciated on the CT scan, but there was no decreased lucency and no evidence of enhancement of this lesion. Thus, a diagnosis of subdural empyema could not be made. Fortunately, the unilateral ptosis and the mass effect on CT prompted an emergency cerebral arteriogram, otherwise, this patient's lesion might have gone undiagnosed. If so, he might well have been subjected to repeat lumbar puncture with the risk of immediate uncal herniation. Moreover, failure to promptly drain the empyema could have also resulted in increased morbidity or death.

Concerning the risk of death from delay in diagnosis of subdural empyema, five of six patients in the series of Kauffman et al¹ who did not have surgical drainage within five days of admission, or in the cases of postoperative infections, within five days after initial neurosurgery, died. The

From the Department of Medicine, Division of Infectious Diseases, University of Tennessee Center for the Health Sciences, Memphis.

Reprint requests to Division of Infectious Diseases, UT Center for the Health Sciences, 3H16 Coleman Bldg., 956 Court Ave., Memphis, TN 38163 (Dr. Baddour).

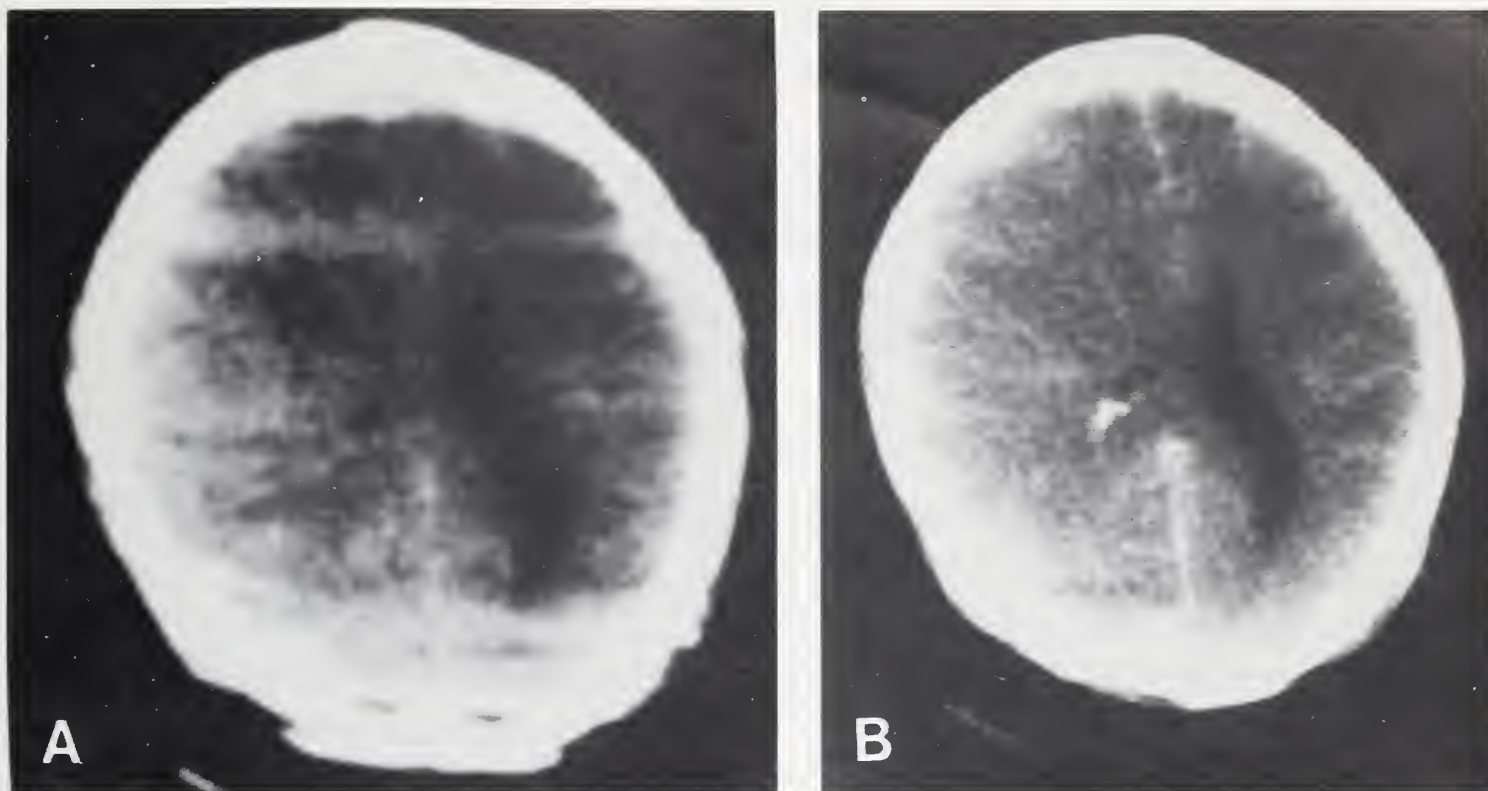


Figure 1. (A) Unenhanced computed tomographic (CT) scan demonstrating mass effect with obliteration of the right occipital horn and shift of midline structures from right to left. No extracerebral fluid collection was demonstrated. (B) Enhanced view with similar findings as in the unenhanced view except for better demonstration of the left ventricular system. Also noted was some contrast pooling in the area of the right occipital horn.

sixth surviving patient was left with a major neurologic deficit. In contrast, of the 11 patients who did have surgical drainage within five days of admission, eight were discharged without a deficit, two were discharged with major deficits, and one died.

The published literature regarding the efficacy of CT scan in facilitating early diagnosis of subdural empyema is contradictory. With the availability of the CT scanner, Kauffman and Leeds³ reported on a second group of five patients with subdural empyema and found no evidence of false-negative or false-positive studies. Furthermore, they concluded that CT will allow more rapid diagnosis of subdural empyema and, thus, should improve the mortality rate. Weisberg et al⁴ reported much the same results in ten consecutive cases of subdural empyema. These authors suggested that the CT scan was "more sensitive" than angiography, although mentioning that empyema may be missed if isodense unless contrast infusion is performed to detect the presence of an enhancing membrane.

In contrast, a series of recent papers⁵⁻⁸ have emphasized the limitations of the CT scan in di-



Figure 2. Cerebral arteriogram demonstrating displacement of the right middle cerebral artery branches from the inner bony table consistent with subdural empyema.

TABLE 1
CASES OF SUBDURAL EMPYEMA UNDIAGNOSED ON CT SCAN

Authors	Age/Sex	Predisposing Condition	CT Scan Findings	Arteriogram
Wortzman et al ⁵	55/F	Diabetes mellitus, alcoholism, pneumonia, meningitis	Normal except for slight obliteration of sulci over the left cerebral hemisphere	Positive
Sadhu et al ^{6*}	11/M	Pansinusitis	Right cerebral edema with displacement of the midline structures to the left	Not Done
Sadhu et al ^{6*}	31/M	Left frontal sinusitis	Midline shift from left to right with a low density zone of edema in the left frontal lobe	Positive
Luken et al ^{7**}	17/M	Sinusitis	Diffuse isodense right hemispheric swelling and a slight midline shift	Positive
Luken et al ^{7**}	23/M	Sinusitis	Massive left hemispheric isodense swelling with a shift of the midline	Positive
Luken et al ^{7**}	15/F	—	Normal (with contrast)	Positive
Luken et al ^{7**}	8/F	Sinusitis	Marked left anterior hemispheric swelling with irregular intra-axial zones of lucency and contrast enhancement	Not Done
Dunker et al ⁸	19/M	Sinusitis	Mildly dilated ventricles without midline shift	Not Done
Dunker et al ^{8†}	22/M	Sinusitis	Left ethmoid and frontal sinusitis with an area of decreased absorption coefficient in the left frontal area with questionable extra-cerebral collection of fluid over the left convexity	Not Done
Present Case	19/M	Sinusitis	Mass effect with a shift of midline structures to the left, but no areas of increased or decreased attenuation	Positive

* Three other cases reported in this series were accurately diagnosed by CT scan.

**This study included four patients with "primary" subdural empyema (i.e., no previous neurologic disease) and two patients with "secondary" empyema following neurosurgical procedures. The CT scan was diagnostic in the "secondary" cases but not in any of the four "primary" cases.

† CT scan was done four times without ever showing conclusive evidence of empyema.

agnosis of subdural empyema (Table 1). Including the present report, at least ten such patients have been documented. CT findings in these cases were variable, but the most frequent finding has been that reported in our patient: a mass effect, suggesting cerebral edema, with evidence of a shift of midline cerebral structures. Arteriogram was performed in six of these ten cases, and in each case it was diagnostic.

With the exception of the present report and that by Kauffman and Leeds,³ data are not provided regarding the model of CT scanner used. The point is an important one, because the greater resolution achievable by newer CT models might possibly improve their diagnostic accuracy for subdural empyema. For the present, however, there are no persuasive data to confirm that this is so. Therefore, clinicians should be aware of potential false-negative CT results and should proceed promptly to arteriography if the clinical

picture is suggestive of subdural empyema and the CT scan does not demonstrate such a lesion.

Acknowledgements:

We are grateful to Dr. James Kennedy for his assistance in caring for this patient.

REFERENCES

1. Kauffman DM, Miller MH, Steigbigel NH: Subdural empyema: Analysis of 17 recent cases and review of the literature. *Medicine* 54:485-498, 1975.
2. VanAlphen HAM, Dreissen JJR: Brain abscess and subdural empyema: Factors influencing mortality and results of various surgical techniques. *J Neurol Neurosurg Psychiatry* 39:481-490, 1976.
3. Kauffman DM, Leeds NE: Computed tomography (CT) in the diagnosis of intracranial abscesses. *Neurology* 27:1069-1073, 1977.
4. Weisberg LA, Nice C, Katz M: *Cerebral Computed Tomography: A Text-Atlas*. Philadelphia, WB Saunders Co, 1978, pp 240-244.
5. Wortzman DJ, Tucker WS, Finlayson DM, et al: Subdural empyema with negative CT scan: A case report. *Can J Neurol Sci* 7:67-69, 1980.
6. Sadhu VK, Handel SF, Pinto RS, et al: Neuroradiologic diagnosis of subdural empyema and CT limitations. *AJNR* 1:39-44, 1980.
7. Luken MG, Whelan MA: Recent diagnostic experience with subdural empyema. *J Neurosurg* 52:764-771, 1980.
8. Dunker RO, Rashida AK: Failure of computed tomographic scanning to demonstrate subdural empyema. *JAMA* 246:1116-1118, 1981.

MEDICAL ACCOUNTING SYSTEM

- **MEDICARE ELECTRONIC PROCESSING**

Medicare claims may be processed electronically. Eliminates forms printing, filing and retrieving. Known as the paperless claim concept which saves time, reduces administration cost, and improves cash flow. Software available for most computers or will install complete system.

- **MEDICAL MANAGEMENT SYSTEM**

This system provides a comprehensive set of software for:

- Electronic Processing of Medicare Claims
- Appointment Schedules for Each Doctor
- Superbill/Demand Bill Processing
- Electronic Patient Accounts Receivable Ledgers
- Patient Statements
- Collection Reports
- Insurance Forms
- Collections and Adjustment Reports
- Transaction Registers
- Route Slip Report
- Aged Accounts Receivable
- Doctor Production Reports
- Collection Letter Selection Report
- Deposit Report and Register

COMPUTER TECHNOLOGY COMPANY

P. O. Box 15562
Nashville, Tennessee 37215
(615) 794-7385

A Hi-Technology Company

Two Forms of Insulin Resistance

WILLIAM C. THOMPSON, M.D.; GREGORY W. SHIELDS, M.D.; and
OSCAR B. CROFFORD, M.D.

Oscar Crofford, M.D.:

For insulin taken by injection to be effective, it must be absorbed from the injection site, transported via the bloodstream to the target tissues, combine with insulin specific receptors on the cell surface and initiate in the target cell a change in the rate of specific metabolic processes. At any step along the way this orderly transfer of information can be interrupted.

Insulin resistance is said to exist when a patient requires a larger than expected dose of insulin in order to bring about the desired biological change. Although many diabetics who take insulin may have some degree of insulin resistance, the classical patient requires more than 200 U/day for more than two days. A better clinical definition is the requirement of more than 200 U/day to maintain pre-meal blood glucose values at less than 140 mg/dl. Remembering that the average diabetic requires about 40 U/day, this means that the patient requires about a five-fold hormone excess.^{1,2}

Two patients with insulin resistance will be used to illustrate the spectrum of insulin-resistant states and suggest an approach to the diagnosis and clinical management (Table 1).

William Thompson, M.D.:

A 57-year-old white woman was transferred to Vanderbilt Hospital in September, 1981, from an outlying community hospital for evaluation of uncontrolled diabetes mellitus and hypertension. Seven years previously, mild systolic and diastolic hypertension was discovered and treated with methyl-dopa and diuretics. Hyperglycemia developed three years before admission, and after initial therapy with oral hypoglycemics she was treated with insulin. Over the 12 months preceding admission, her hypertension had become more severe and labile. Her diabetes required progressively increasing doses of insulin in order to control her hyperglycemia, and she had been hospitalized repeatedly for glucose control. Immediately prior to transfer, she was being treated with over 700 U/day of regular beef-pork insulin given subcutaneously.

From the Department of Medicine, Vanderbilt University, Nashville. Dr. Thompson is now with Cornell Medical College, New York. Presented Dec. 17, 1981.

Reprint requests to Pulmonary Division F469, Cornell Medical College, 1300 York Ave., New York, NY 10021 (Dr. Thompson).

An abdominal CT scan performed several months earlier had shown a small right adrenal mass. Despite negative urine collections, she was being treated presumptively as having a pheochromocytoma. Other problems included increasingly symptomatic congestive heart failure, marked weight loss, recurrent postural syncope, and candida vulvovaginitis. Her medications included dibenzylamine, 30 mg three times a day; metoprolol, 100 mg four times a day; hydrochlorothiazide, 50 mg two times a day; and PRN doses of methyl-dopa and clonidine.

On examination she appeared chronically ill, with diffuse muscle wasting. Her blood pressure was 240/90 mm Hg, with a pulse of 76 beats per minute and no orthostatic changes. There was a grade 1 hypertensive retinopathy, and moderate jugular venous distension, bibasilar moist rales, murmurs of mitral regurgitation and aortic stenosis, diffuse vulvovaginitis, and peripheral edema. A chest x-ray showed cardiomegaly with pulmonary edema. Laboratory data included normal electrolytes, glucose 735 mg/dl, BUN 34 mg/dl, creatinine 1.8 mg/dl, and albumin 3.4 gm/dl. There was 4+ glycosuria and pyuria without ketonuria. The white blood cell count was 3,900/cu mm (86% neutrophils, 10% eosinophils, and 4% lymphocytes) with a PCV of 35% and platelets of 114,000/cu mm.

The patient was progressively weaned from her α and β blockers and methyl-dopa increased to 500 mg three times a day, with subsequent blood pressures around 220/90 mm Hg. Her heart failure resolved with salt restriction and withdrawal of β blockers, but the eosinophilia and lymphopenia persisted; a bone marrow biopsy was unrevealing. Abdominal CT scan showed a 2 x 2 cm right adrenal mass, but numerous urine collections showed no evidence of adrenal hyperfunction or pheochromocytoma. The identity of the mass was not established.

The patient was given an 1,800-calorie diet and begun on a continuous intravenous insulin infusion, with frequent monitoring of blood glucose values (Fig. 1). Beef-pork, pure pork, and pure beef insulin preparations were tried with little apparent difference in response. She required from 160 to 250 units of insulin per day intravenously to maintain her glucose in the range of 200 to 500 mg/dl. Tests at Vanderbilt showed a high titer of insulin antibodies. Sulfated insulin was obtained, and the patient was treated with subcutaneous doses four times a day; while hospitalized she was instructed in home glucose monitoring (Fig. 2). Her initial total daily dose of sulphated insulin was 104 units, but in the nine months since discharge her daily requirement has decreased to 6 units, and she has not required subsequent hospitalization for glucose control. Her weight has increased, and she has been symptomatically much improved.

Oscar Crofford, M.D.:

The case is an example of "immunogenic insulin resistance," or insulin resistance due to high titers of circulating antibodies to beef or pork insulin. The key to diagnosis was three-fold: (1)

TABLE 1
INSULIN RESISTANCE: AN APPROACH TO DIAGNOSIS

INJECTION SITE		BLOOD STREAM	TARGET ORGAN
COMMON			Obesity Infection, Burns, Trauma, Ketoacidosis
RARE			Endocrine syndromes Cushings syndrome Acromegally
VERY RARE		High titers of circulating antibodies to insulin (1 case per 1,000-10,000 diabetics)	Receptor disorders Type A Syndrome [reduced receptor numbers, ovarian dysfunction and acanthosis nigricans]
VERY RARE	Excessive degradation of insulin (~ 12 cases)		Type B Syndrome [anti-receptor antibodies and acanthosis nigricans] (~ 14 cases)
Not resistant to I.V. insulin		OTHER: Lipoatrophic diabetes Ataxia - telangiectasia Prader - Willi syndrome Werners syndrome Leukemia Collagen vascular disease Uremia Liver disease	

demonstration that the resistance was to both intravenously and subcutaneously administered insulin, thus excluding excessive hormone degradation at the injection site; (2) exclusion, largely on clinical grounds, of insulin resistance syndromes at the target cell level; and (3) direct demonstration of high titers of antibodies to beef insulin.^{3, 4}

Initial treatment requires the use of an insulin preparation that is biologically active yet does not cross-react strongly with antibeeff or antipork insulin antibodies. Sulfated insulin is such a preparation. It is manufactured by Connaught Laboratories in Toronto and available in the United States only through collaboration with Dr. John K. Davidson at Emory University School of Medicine in Atlanta. Dr. Davidson's laboratory also measured the antibodies to beef insulin in this patient and reported a maximum binding capacity in excess of 30 mU/ml.⁵ Sulfated insulin, which contains from one to eight sulfate groups per molecule, is produced by reacting beef insulin with concentrated sulfuric acid at low temperatures. It has a bioactivity of 7 U/mg (down from 26 U/mg). Presumably, the sulfate groups alter

the immunoreactivity of insulin either by increasing the negative charge, or by causing significant changes in the conformation of the insulin molecule.

Long-term treatment of insulin resistance requires that the insulin used in the initial treatment be non-antigenic. Sulfated beef insulin is said to be non-antigenic in humans. The existing antibodies will eventually disappear and no new antibodies will be formed, so that the patient can then be switched to standard doses of biosynthetic human insulin (BHI), which also is non-antigenic in humans and has full biological potency. Not that BHI would not work for initial therapy since it would cross-react strongly with antibeeff or antipork insulin antibodies.

The danger in the use of sulfated insulin is that one could fail to recognize the need to decrease the dose as the antibody titer falls. This decreased need has clearly occurred in the patient presented, and she will soon be a candidate for BHI therapy.

Also note the importance of home blood glucose monitoring in managing this case. Although immunogenic insulin resistance is rare, the clini-

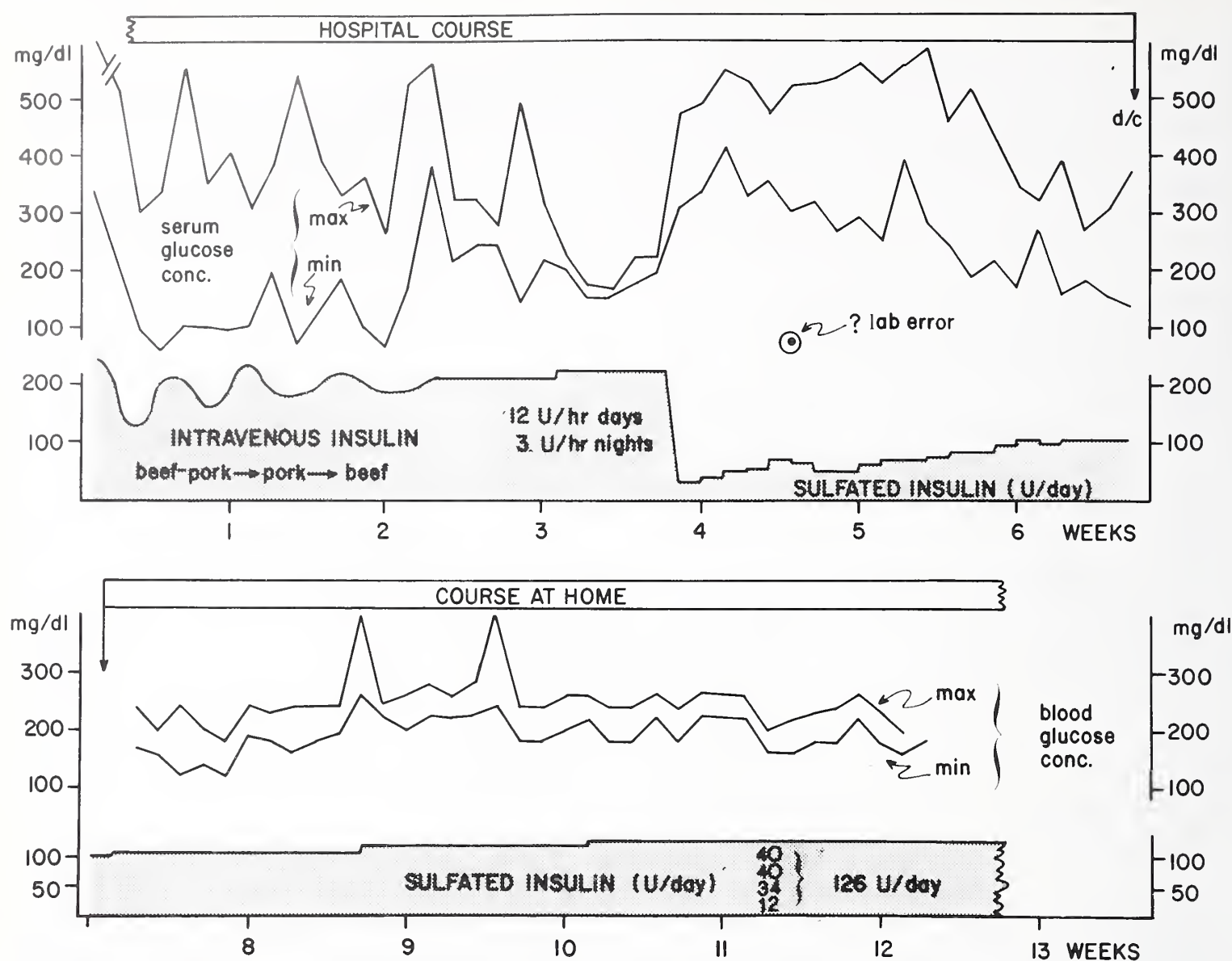


Figure 1. Insulin requirements and blood glucose values before and after sulfated insulin therapy.

cal indications for home blood glucose monitoring occur daily in the practice of doctors caring for patients with diabetes. Patients with high renal glucose thresholds, pregnant diabetics, patients with non-symptomatic insulin reactions, patients receiving "intensive" insulin therapy (i.e., multiple daily injections or "pumps"), and perhaps all insulin-dependent diabetics can benefit from home glucose monitoring.⁶

Of the several methods now available, we prefer the use of Chemstrips. It does not require a colorimeter; it does not take as much technical know-how (i.e., standardization of the colorimeter); it does not require water to wash the blood off the strip and, with practice, many patients can estimate the true blood glucose to within ± 20 mg/dl.

The second case is illustrative of the most commonplace form of insulin resistance—obesity.

Greg Shields, M.D.:

A 45-year-old white woman was discovered to have diabetes mellitus in 1964. She was initially treated with oral hypoglycemics and subsequently gained 15 lb within a year. She was then treated with a carbohydrate-restricted diet alone and lost weight. Due to poor glucose control, oral hypoglycemics were restarted and continued for ten years. During this time her weight rose to 175 lb. Insulin was begun in 1976, and progressively larger doses (up to 100 U/day) were required to control her diabetes. Her weight rose to 185 lb. In about 1978 insulin was discontinued, and oral hypoglycemics and an exercise program were begun. Her weight gradually fell to 150 lb, but during the following year glycosuria was noted, and insulin therapy was again substituted for oral therapy. Her weight rose to 180 lb.

In August, 1981, when she was seen at the Vanderbilt Diabetes Center for evaluation, her weight was 177 lb, and a random blood glucose was 330 mg/dl on 60 units of insulin each morning. She was instructed on a 1,600-calorie diet, leading over a two-month period to a gradual decrease in her insulin dose to 20 U/day.

In November, 1981, the patient was hospitalized at Vanderbilt. At 5 ft 2 in in height, her ideal body weight was calculated to be 115 to 125 lb. Her admission weight was 170 lb; physical examination revealed only moderate obesity. The blood glucose was 350 mg/dl. She was begun on a diet of water, coffee or tea, and sugarless soda, which she continued

for three days. All insulin was discontinued. The fast was well tolerated, and her blood glucose progressively declined to 120 mg/dl. She did not develop acidosis, although there was ketonuria. A 600-calorie high-protein diet was begun after three days. By discharge at five days, her fasting blood glucoses were 90 to 100 mg/dl, and her weight had fallen to 163 lb (Fig. 3).

At home she remained on the 600-calorie diet, monitoring her own glucose levels. She was given vitamins, potassium and calcium supplements and within two months her weight had fallen to 145 lb, with glucose values being consistently 80 to 100 mg/dl. Her glucose and weight have since paralleled each other in accordance with her degree of dietary compliance. She remains off all hypoglycemic agents.

Oscar Crofford, M.D.:

Management of the obese, non-insulin-dependent diabetic requires an understanding that this is a form of insulin resistance rather than an insulin deficiency state. The most compelling evidence is that obese patients have subnormal responses to graded doses of exogenous insulin given intravenously. Additionally, obese non-insulin-dependent diabetics who reduce their caloric intake have a restoration of insulin sensitivity and oftentimes achieve satisfactory control of their diabetes without the use of drugs or exogenous insulin. The difficulty lies in achieving and sustaining a program of reduced food intake. In today's case, the strategies of fasting, high protein diet and home blood glucose monitoring were employed, the rationale being that many patients get discouraged with a more conventional weight reduction diet. A short period of severe caloric

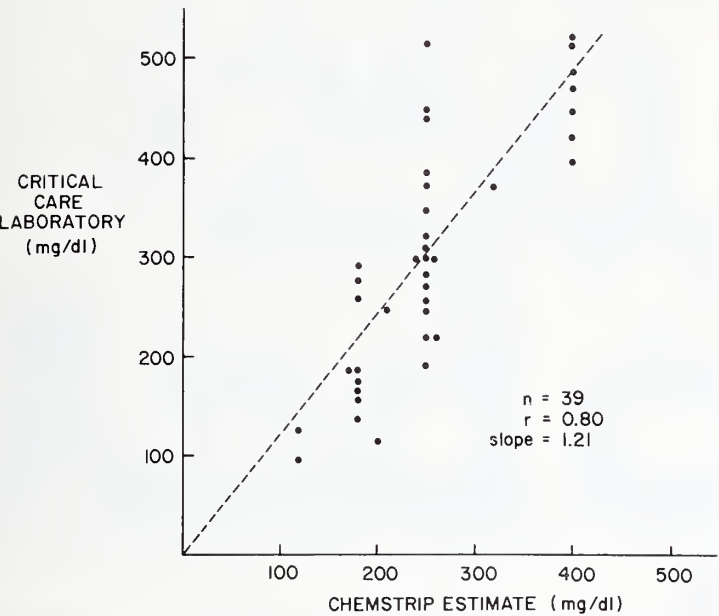


Figure 2. Simultaneously determined blood glucoses by the laboratory and the patient.

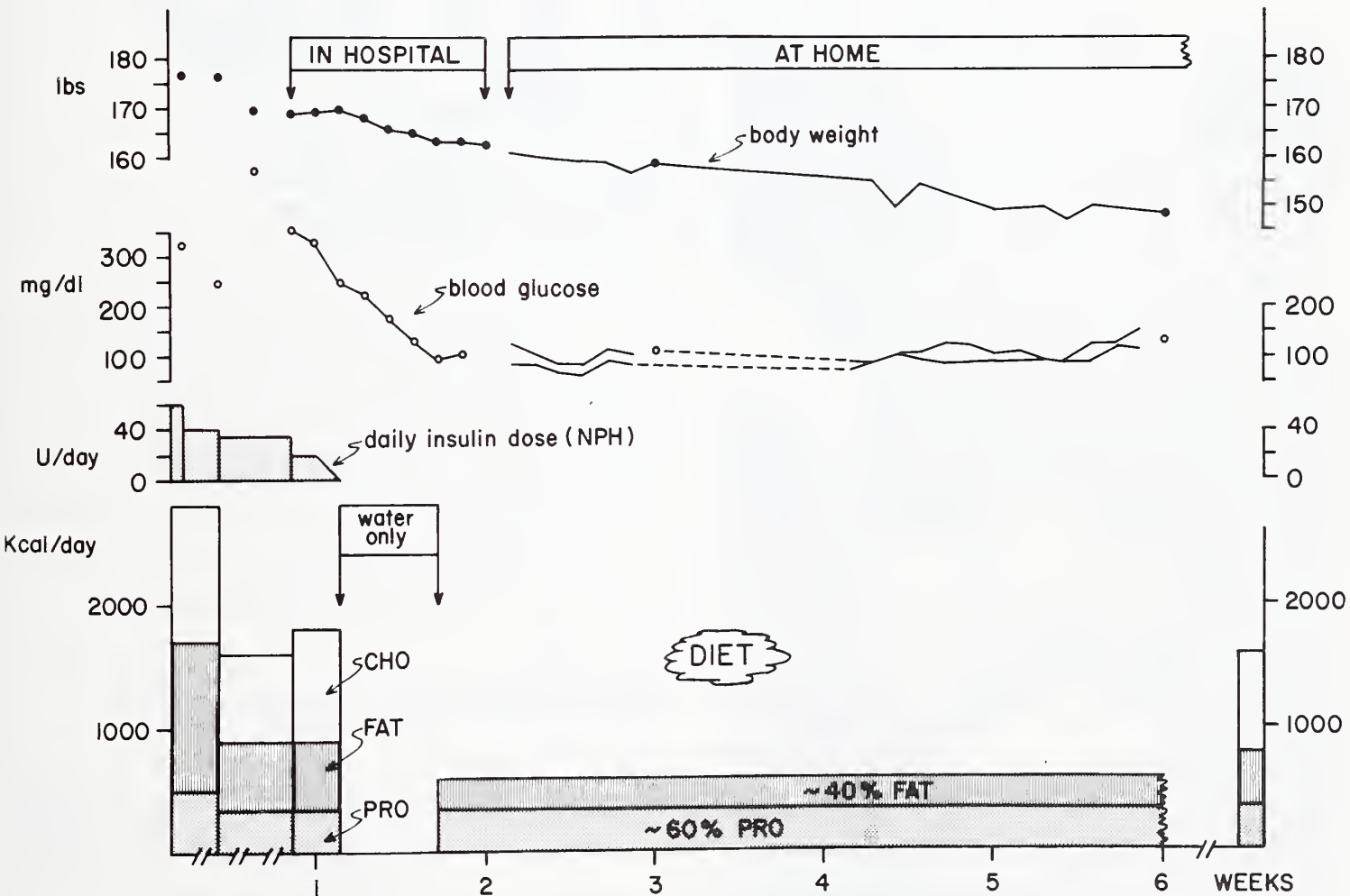


Figure 3. Diet, weight and blood glucose before and after a protein-sparing modified fast.

restriction with a rapid fall in blood sugar as confirmed by home glucose monitoring provides some patients with the extra incentive they need to change their fundamental eating behavior.

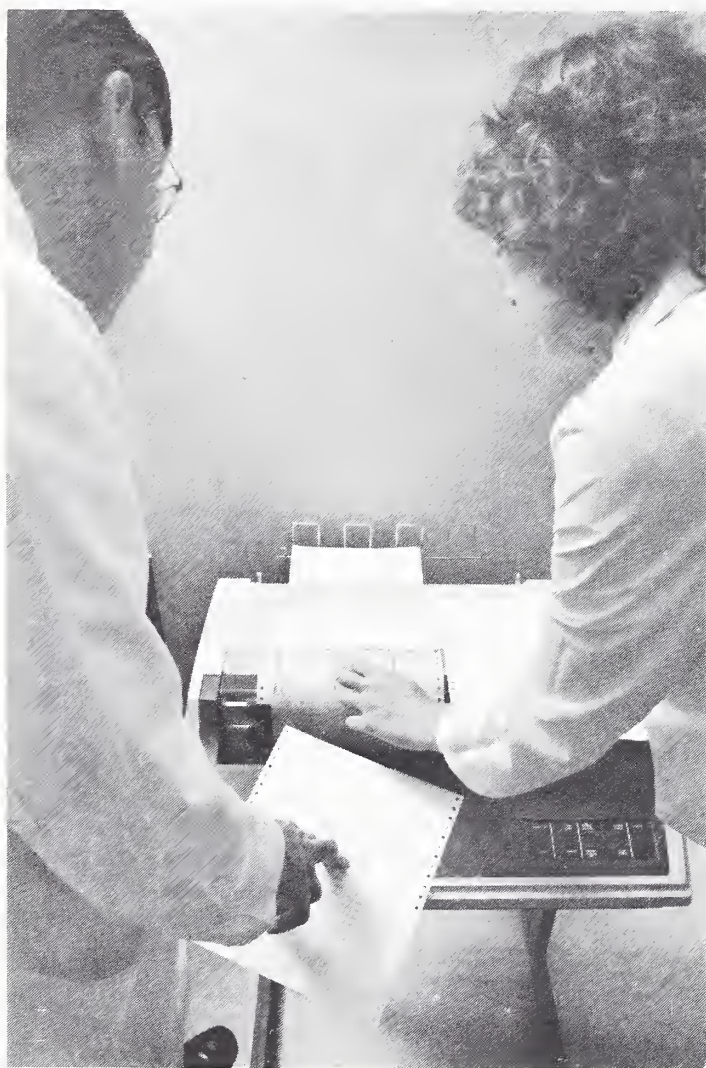
Although the mechanism of the insulin resistance in obesity is complex and still unclear,⁷⁻⁹ it probably involves both a decreased target cell response to maximum stimulation by insulin (a post-receptor disorder) and a decrease in receptor numbers (a receptor disorder). The facts are that (1) obesity is associated with insulin resistance, (2) diabetes occurs when the individual is unable to compensate completely for insulin resistance by the secretion of additional insulin, and (3) overeating is the real cause. The *mechanism* by which overeating causes insulin resistance is controversial.

Supervised use of a protein-sparing modified fast can be very effective in achieving weight reduction and long-term weight control. The method outlined by Bistrian has worked well in motivated patients.¹⁰ Care must be taken to use supplemental potassium, calcium, and vitamins to avoid deficiency states associated with prolonged

fasting or rigorous dieting. Similarly, patients should not use diuretics or restrict salt and water intake during such a program. Effective dietary intervention involves dietitians, clinic nursing staff, and patients' families as well as the patient and physician. Weight reduction remains the treatment of choice for diabetics who have obesity-mediated insulin resistance as the basis of their hyperglycemia.

REFERENCES

1. Paulsen EP, Courtney JW III, Duckworth WC: Insulin resistance caused by massive degradation of subcutaneous insulin. *Diabetes* 28:640-645, 1979.
2. Freidenberg GR, White N, Cataland S, et al: Diabetes responsive to intravenous but not subcutaneous insulin: Effectiveness of aprotinin. *N Engl J Med* 305:363-368, 1981.
3. Kahn CR, Rosenthal AS: Immunologic reactions to insulin: Insulin allergy, insulin resistance, and the autoimmune insulin syndrome. *Diabetes Care* 2:283-295, 1979.
4. Shipp JC, Cunningham RW, Russell RO, et al: Insulin resistance: Clinical features, natural course and effects of adrenal steroid treatment. *Medicine* 44:165-186, 1965.
5. Davidson JK, DeBra DW: Immunologic insulin resistance. *Diabetes* 27:307-318, 1978.
6. Olefsky JM: The Insulin Receptor: Physiology and Pathophysiology. *Current Concepts*, The Upjohn Company, 1980.
7. Flier JS, Kahn CR, Roth J: Receptors, antireceptor antibodies and mechanisms of insulin resistance. *N Engl J Med* 300:413-419, 1979.
8. Bar RS, Harrison LC, Muggeo M, et al: Regulation of insulin receptors in normal and abnormal physiology in humans. *Adv Intern Med* 24:23-52, 1979.
9. Symposium on Home Glucose Self-Monitoring—Nine papers. *Diabetes Care* 4:392-426, 1981.
10. Bistrian BR: Clinical use of protein-sparing modified fast. *JAMA* 240:2299-2303, 1978.



BASMED Takes Care of Your Business So You Can Take Care of Your Patients.

BASMED is good business medicine for your medical practice. By freeing your office from time-wasting drudgework like insurance processing and paper shuffling, BASMED lets you tend to your patients, instead of your office problems.

BASMED applies advanced computer technology directly to all the biggest medical office problems. For example, with Automatic Claims Processing, BASMED talks directly to the computer at Blue Cross/Blue Shield, and gets back claim checks in days instead of weeks. BASMED simplifies and speeds every office routine: appointment scheduling, record keeping, billing, and much more. BASMED also generates a variety of helpful reports on demand, including an aging of outstanding insurance claims.

BASMED makes medical office work so simple, easy and error free, it's no surprise that people call it **living software**.™

Call or write today to see how BASMED can take care of business at your practice.

**AUTHORIZED
DEALER**


**TEXAS INSTRUMENTS
COMPUTER SYSTEMS**



Bob Thornton
Business Application Systems, Inc.
P.O. Box 240246
Memphis, Tennessee 38124
1-800-334-7010

Take UP TO \$250,000. And call us anytime.

At Finance One, we understand the special needs of the physician. We know that it takes solid financial resources to build and maintain a successful practice.

You constantly need capital to keep up with changing equipment; you need funds to furnish your offices or maybe even to invest in an existing practice.

Whatever your financial needs, we can help. We're part of Manufacturers Hanover, one of the nation's largest financial institutions; and we have the resources to loan you up to \$250,000 or more. Just call us anytime.

TOLL FREE: 1-800-523-5374

**FINANCESM
ONE**

Financial Services from
Manufacturers Hanover

Finance One of Tennessee, Inc., Centrum Building, Suite 430, 6363 Poplar Ave.,
Memphis, TN 38119 (901) 683-8200



Equal Housing Lender

EKG of the Month

W. BARTON CAMPBELL, M.D.

A 49-year-old man with a history of palpitations and tenderness in the right upper quadrant was found to have cholelithiasis. On admission for cholecystectomy an electrocardiogram was obtained (Fig. 1).

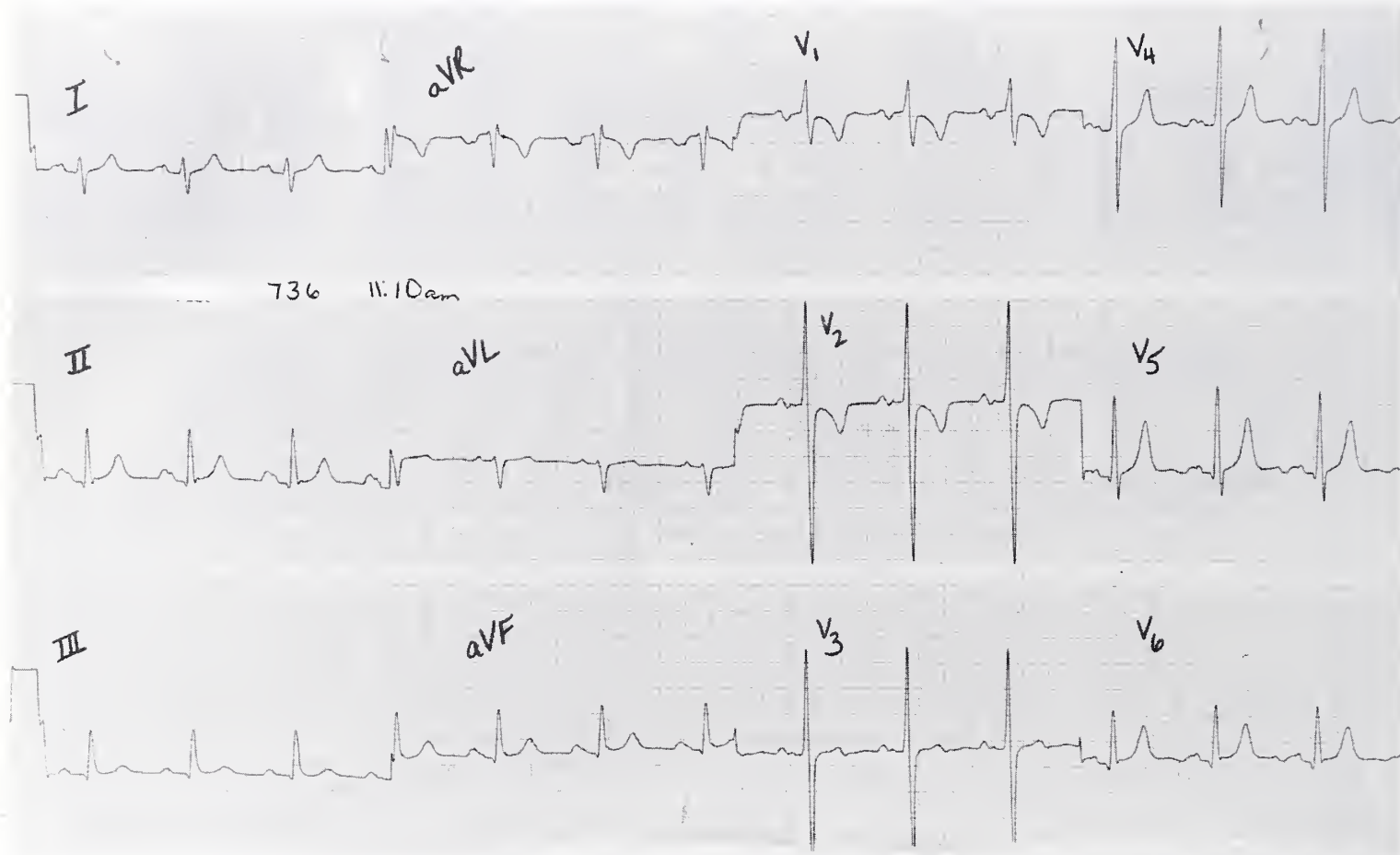


Figure 1

Discussion

The electrocardiogram shows sinus rhythm at a rate of 76/min. The P wave is broad and notched in standard lead I, II, aVR, and aVF. The P wave duration is 0.14 seconds, the PR segment duration is 0.06 seconds (a PR interval of 0.20 seconds), and the QRS duration is 0.09 seconds. The late QRS forces are prominently rightward, inscribing a prominent S wave in standard lead I. In addition a terminal R wave is noted in aVR. A 6-mm R wave is present in V₁ in con-

junction with a 6-mm S wave. The T waves are inverted in V₁ and V₂.

Broad notched P waves in conjunction with the posterior P forces are highly suggestive of left atrial enlargement.¹ The prominent rightward and anterior forces suggest right ventricular enlargement.² This combination of left atrial and right ventricular enlargement often results from mitral valve disease with increased left atrial pressures and increased pulmonary vascular resistances causing right ventricular enlargement.

An echocardiogram (Fig. 2) showed marked thickening in the mitral valve with a flattened EF slope and a posterior leaflet which did not show

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

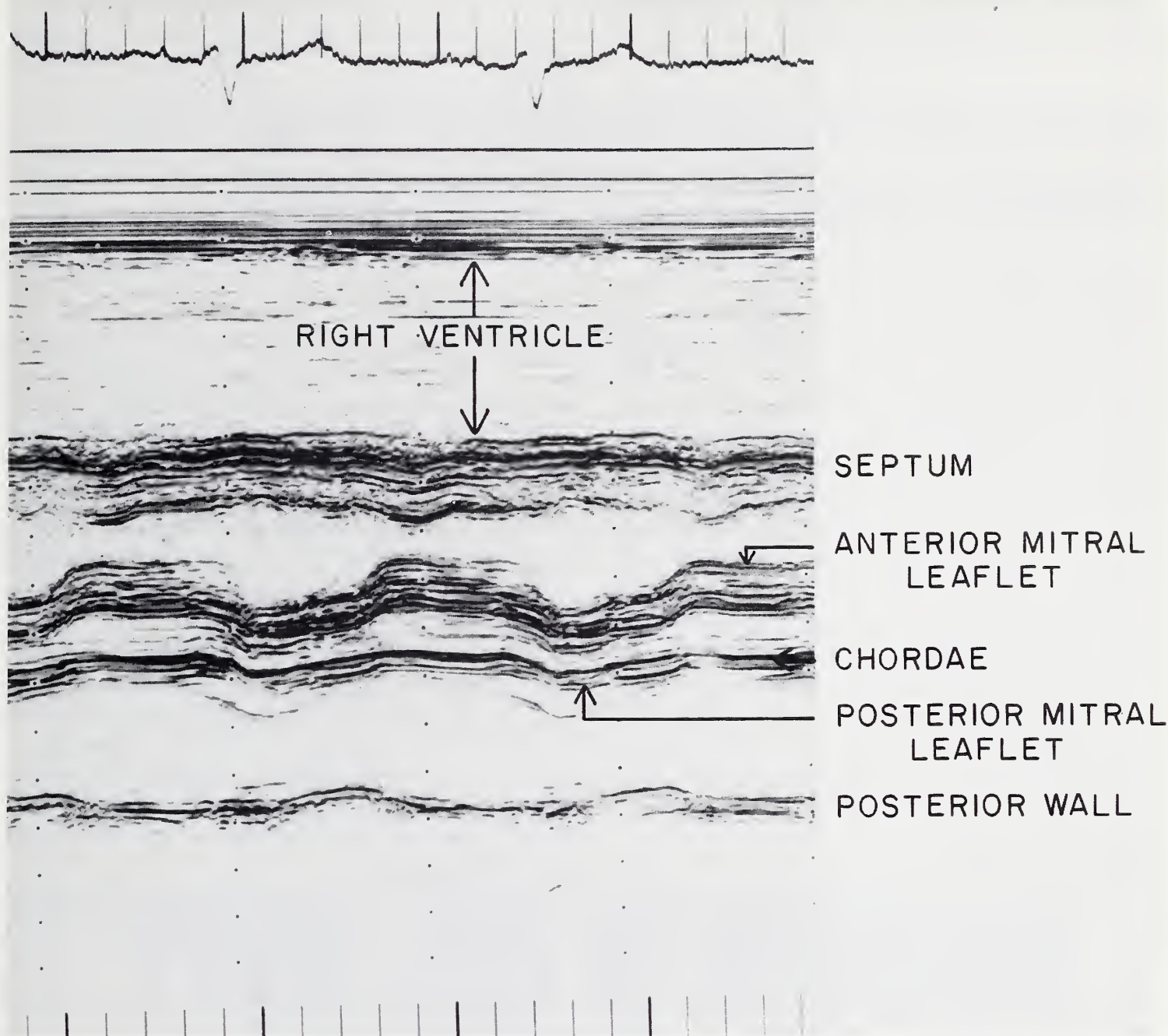


Figure 2

normal reciprocal mobility. This pattern is diagnostic of mitral stenosis. The echocardiographic left atrial diameter was 5.8 cm (normal 1.9 to 4.0 cm). The right ventricular diameter was enlarged at 3.5 cm.

The patient walked for seven minutes on a treadmill utilizing the Bruce protocol. Cholecystectomy was carried out with no complications and the patient has had no subsequent cardiovascular symptoms.

CONCLUSION: Mitral stenosis resulting in left atrial enlargement and right ventricular enlargement.

REFERENCES

1. Macruz R, Perloff JK, Case RB: A method for the electrocardiographic recognition of atrial enlargement. *Circulation* 17:882, 1958.
2. Flowers N, Horan LG: Subtle signs of right ventricular enlargement and their relative importance, in Schlant RC, Hurst JW (eds): *Advances in Electrocardiography*. New York, Grune and Stratton, 1972, pp 297-308.

Boards and Advisory Committees of the Tennessee Department of Public Health

DIANE DUNN

A large number of physicians all across Tennessee are performing an important public service by contributing their time and knowledge as members of the various boards and advisory committees of the State Department of Public Health. The Department administers 45 different health-related boards and committees, over half of which have physician members who serve as a vital link with the medical community in working for the health of Tennesseans.

Although each board and committee serves a unique purpose related to public health, they can be classified into two major types: regulatory boards and advisory committees. Physician representation is essential to the operations of each.

Regulatory Boards

Twenty-seven boards are regulatory in nature, each composed of members appointed by the Governor. Twenty-three of these boards ensure the quality of professional medical care by licensing and regulating various health care providers and related services. Physicians serve as voting members of the following medical-professional licensing boards:

- *Board of Medical Examiners*—5 members total, all physicians.
- *Board for Licensing Health Care Facilities*—12 members total, 4 physicians.
- *Board of Nursing*—11 members total, 2 physicians.
- *Board of Examiners for Nursing Home Administrators*—8 members total, 1 physician.
- *Board of Physical Therapy Examiners*—5 members total, 1 physician.
- *Board for Examiners for Speech Pathology and Audiology*—6 members total, 1 physician.
- *Board for Licensing Hearing Aid Dispensers*—5 members total, 1 physician.

In addition to serving as members of licensing boards, over 500 physicians alternate as members of the Medical Malpractice Review Board. The Tennessee Medical Association (TMA) submits a list of physicians according to specialty which is used by the executive director in selecting board members to review all medical malpractice actions filed in court for the purpose of facilitating their disposition.

The Department also provides staff support for environmental regulatory boards which protect the quality of the environment by establishing and enforcing standards to prevent harmful contamination of our vital resources. The *Air Pollution Control Board* has 12 members, one of them a physician with knowledge of the health effects of air contamination.

All of the medical-professional and environmental regulatory boards have a well-defined statutory basis. The law usually mandates the composition of these boards and, in many cases, requires that recommendations for appointment of members come from specific professional organizations, such as TMA. The Governor depends on TMA for recommendations in making many of his appointments to health-related regulatory boards.

Advisory Committees

The Department relies heavily on its 18 advisory committees, 16 of which have physician members. These committees relate to various public health programs by providing advice on policy matters. The members of these committees participate in developing recommendations used by the Commissioner of Public Health and program administrators in making important policy decisions concerning everything from scope and extent of services to the manner in which services are provided. Over the years, these committees have proved an effective and valuable tool in the development of public health pol-

From the Tennessee Department of Public Health, Nashville.

icy. Physicians play an important role in this process by serving on the following advisory committees.

- *Crippled Children's Advisory Committee*—7 members total, 6 physicians.
- *Emergency Medical Services Advisory Committee*—13 members total, 3 physicians.
- *Laboratory Advisory Committee*—13 members total, 3 physicians.
- *Epilepsy Advisory Committee*—11 members total, 5 physicians.
- *Hemophilia Advisory Committee*—7 members total, 5 physicians.
- *Laboratory Personnel and Education Advisory Committee*—12 members total, 3 physicians.
- *Medicaid Medical Care Advisory Committee*—15 members total, 2 physicians.
- *Primary Health Care Advisory Board*—19 members total, 5 physicians.
- *Public Health Council*—12 members total, 6 physicians.
- *Renal Disease Advisory Committee*—11 members total, 5 physicians.
- *Hypertension Advisory Committee*—20 members total, 15 physicians.
- *Child Safety Program Advisory Committee*—9 members total, 2 physicians.

- *Medicaid Formulary Advisory Committee*—8 members total, 3 physicians.
- *State Council for Family Planning Services*—35 members total, 2 physicians.
- *Family Planning Medical Advisory Board*—6 members total, 4 physicians.

The advisory committees vary somewhat according to structure and appointment process. Some of these committees have specific statutory authorization and requirements, while others are established according to program guidelines. Members of some committees are appointed by the Commissioner of Public Health, whereas others are gubernatorial appointees. As with appointments to the regulatory boards, TMA is active and supportive in providing recommendations upon request when vacancies occur on these committees.

In summary, the regulatory boards and advisory committees are essential to the satisfactory maintenance of the public health in that they sustain objectivity and accountability in health-related regulatory and program policy matters. Just as essential to the public health are the many physicians who sacrifice their personal and professional time for the benefit of the people of this state by serving as committee and board members.

YOUR JOB IS MEDICINE

However, there is a business side to the practice of medicine.

OUR JOB IS . . .

business consulting and financial management specifically for physicians. A principal of our firm is married to a physician.

Our services include ideas or methods regarding:

Office Sharing & Expenses
Pension/Profit Sharing Plans
Tax Alternatives
Accounts Receivable
Renting vs. Building

Pros & Cons of a P.C.
Practice-building Techniques
Offer To a New Physician
Sale of a Practice

Nashville
2120 Crestmoor Road
Nashville, TN 37215
(615) 383-3289



Memphis
5100 Poplar Ave. Suite 2812
Memphis, TN 38137
(901) 685-8305

Initial Consultation at No Charge

the Consulting Group

Daytime and Evening Hours

Don't let previous declines, ratings or health conditions stop you from applying for TMA Life Insurance Coverage

IPSCO, your TMA life insurance plan administrator welcomes the opportunity to assist in underwriting special cases. Contact us on the following:



DIABETES
OVERWEIGHT
HIGH BLOOD PRESSURE
OPEN HEART SURGERY
OTHER SPECIAL CONDITIONS



IPSCO can give you a shot in the arm with normal or near-normal rates for you or your spouse!

Weighed down by your health problem? Call IPSCO to apply for Life Insurance which will suit your needs. We have succeeded in providing coverage to even the most difficult cases for members with virtually every type of medical history: overweight . . . cancer . . . heart disease . . . ulcers . . . alcoholism and excessive drinking . . .

tuberculosis . . . diabetes . . . asthma . . . even mental illness.

We also have placed coverage on member with hazardous hobbies at normal or near-normal rates! So don't hesitate to call your TMA Life Insurance plan administrator if you have an insurability problem.



Insurance Planning and Service Company, Inc.
822 McCallie Avenue • P.O. Box 1109
Chattanooga, Tennessee 37401

Tennessee Residents:
1-800-572-7389-Toll Free

Non-Tennessee Residents:
0-615-756-2850-Call Collect



GEORGE W. HOLCOMB, JR.

The FTC Challenge

About a year ago the Federal Trade Commission requested the Tennessee Medical Association to supply its staff with copies of all correspondence by our officers and staff, as well as all resolutions passed by the House of Delegates during the past five years related to corporate practice of medicine and physician billing. At the expenditure of considerable time, effort and money, our staff complied and shipped about 350 documents to Washington. As a result of this review Mr. Barry Costilo, FTC Attorney, requested a meeting with your President, the TMA staff and our counsel. At this meeting in June, Mr. Costilo stated that passage of Resolution 14-81 by our House of Delegates, relating to the corporate practice of medicine, raised substantial questions under the antitrust law. It was his contention this would have the effect of inhibiting members of the TMA from freely choosing the type of contractual and billing arrangement each might prefer. We were given the option of agreeing to a consent order, sending a letter of assurance approved by the Board of Trustees which embodies the substantive points in the statement which appears below, or amending TMA Resolution 14-81 to reflect these same points.

After much deliberation, the Board of Trustees has agreed to accept alternative number two in order to avoid a lengthy and costly legal action which most likely would result in the same decision.

In order for the membership to be completely informed about the new TMA policy regarding this issue, as authorized by our Board of Trustees, the following announcement is made.

TENNESSEE MEDICAL ASSOCIATION MEMBERS ARE NOT RESTRICTED FROM ENTERING INTO COMPENSATION ARRANGEMENTS OF THEIR CHOICE

We have been advised by counsel that certain resolutions and ethics statements of the Tennessee Medical Association ("TMA"), which pertain to corporate practice of medicine and separate billing by hospital-based physicians, raise questions under the antitrust laws. We want to eliminate any possible question that ethics positions of our association violate the antitrust laws. Accordingly, we wish to make the following clear:

1. TMA and its trustees, councils, committees, officers, agents, and employees will not directly or indirectly restrict, interfere with, or seek to prevent any physician or organization from entering into any compensation arrangement of his or her choice with whomever he or she chooses. This means, for example, that a physician can elect to enter into a salaried employment contract to render medical services to patients for a hospital or other organization if he or she so chooses or can elect to have a hospital bill patients in its own right for the physician's services if that is the physician's choice. Such conduct shall not be considered improper or unethical, and TMA shall refrain from making adverse statements or representations concerning the ethical propriety of such acts. It is understood that professional peer review of specific physician fees is not affected by this statement.
2. Any and all TMA resolutions, statements, actions, or practices contrary to the position expressed in paragraph 1 of this announcement are fully rescinded and hereafter will be considered unenforceable. This includes but is not limited to TMA Resolution 14-81.
3. This announcement does not constitute an admission by TMA that any law has been violated.

George Holcomb Jr MD

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication

Address papers, discussions and scientific matter to
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson

GEORGE W. SHANNON, M.D., Jackson

CLAUDE H. CROCKETT, JR., M.D., Bristol

H. VERDAIN BARNES, M.D., Chattanooga

FRANCIS W. GLUCK, JR., M.D., Nashville

JOHN B. THOMISON, M.D., Nashville, Ex-Officio

OCTOBER, 1982

editorials

The Really Great One!

Walter Mitty performed an emergency tracheostomy with his pocket knife and used the top of his fountain pen as the tracheostomy tube, thereby becoming a hero until his bubble burst when he heard a child say, "Puppy biscuits! Mama, the man said, 'Puppy biscuits'." Walter Mitty was fantasizing, of course, and while we may not, like Walter, engage in it overtly, all of us must some-

times feel we have something great within us if only we could get it out. More often than not, though, our "muse" is spelled m-e-s-s. I have a whole drawer full of salads that refused to jell and cakes that fell, so to speak, and this piece, like every other one, is in danger of winding up there with them before it is done. That there aren't many Beethovens around becomes immediately evident whenever we switch on the radio. What comes out is usually the reflection of someone's belief (or hope) in himself—that this is the really great one, or at least that someone else will think it is.

Watching the combined mass of the New York Philharmonic and Israel Symphony Orchestras in concert the other night, I saw a sea of musicians, all in tune, making an incomparable, virtually indescribable, sound. I nearly said "sounds," but what came from the TV set was *a sound*. Continuing the example of music, there are among us those who recognize their inability to be a Heifitz or a Perlman, and become instead a part of a team. There they were—ordinary mortal men and women, merrily tooting or sawing away on their instruments, producing a swan, where any one individually would have come up a goose. Right?

Wrong. Tucked away deep in the violin section was one of the masters himself, none other than Itzhak Perlman, merrily sawing away with all those lesser mortals, unsung and generally unnoticed except for a casual remark by the commentator that he was there. How many other truly great musicians were there as well I have no idea. It is tempting to say, "All of them," and let it go at that. I couldn't be far wrong.

The individual that brings it all together, and really makes it go, is the conductor of the orchestra. Maybe you watched the telecast, and saw Zubin Mehta dreamily wave in the pianissimos, or with fire in his eyes sweep the cymbals and tympani into a crescendo to the resounding monumental fortissimos. Magnificent. Superb. Walter Mitty did that, too, but nobody else, saving of course, ourselves, knew about it. Another who did it was Mr. Blossom: each evening, dressed up in his formal attire, he placed his score on the music stand, and raising his baton, directed his tape recorder in one classic after another before the eyes of his adoring wife. To anyone else he would have looked pretty silly, and Mr. Mehta, for all his musical attributes, charm, and zest would have fared no better. While it is true a team will not go far without its captain, the converse applies at least equally well.

Trained as we are in problem solving and accustomed to making difficult decisions with a minimum, or at least no more than a modicum, of hesitation and self-doubt, doctors as a rule do a splendid job of taking care of their patients, even to knowing when to consult with others, and in the doing of it. Except when we are consulting, though, the farther most of us get from being the captain, the less well we perform. Unfortunately, this spills over from medical to non-medical pursuits, or perhaps more correctly, non-patient care pursuits. The public is partly to blame for this, as if often imputes to physicians expertise they do not have. After blushing becomingly, we usually accept it. Though there are some notable exceptions, doctors generally are both impolitic and impovident. This does not deter most of us from trying our hand at both politics (used in its broad sense) and business, often with disastrous results.

Much that is amiss in medicine today can be traced to the problem of too many chiefs and not enough Indians. The splendid performance of the Berlioz symphony would have been a great deal less splendid if Mr. Perlman had decided to play the Bach "Chaconne," even though he unquestionably would have done it superbly. In the same way, much that is amiss in society generally could be mitigated if the cobbler would stick to his last and not be trying his hand at millinery.

The simultaneous performance of a symphonic work under a single conductor by two orchestras was a tour-de-force not only by Mr. Mehta but by each individual player, as well. To use the vernacular, they really had their act together. It still remains for medicine to show it can make an orchestra out of several hundred thousand virtuosi. Its recent record along those lines has not been good.

J.B.T.

The Goblins 'll Getcha . . .

It being August, for better or worse Friday the thirteenth, to quote Pogo, happen to come on a Friday this month. "Be careful and don't walk under any black cats today," cautioned a disc jockey on an early morning radio show. But it was too late, because without realizing the date I had already crossed paths several times with our little black cat, even though she is much too small to walk under. I couldn't tell that it made much dif-

ference, as the day seemed not much worse (or better) than any other.

On a recent trip to Scandanavia we had a couple of attractive, knowledgeable, and well-educated tour guides, one in Norway and one in Denmark, who told us stories about the trolls (or "hidden people") that inhabit the watery places, particularly those beneath waterfalls (of which Norway has a lot and Denmark few, if any, being very flat). Both claimed to have grown up believing the stories, and also to have continued believing them as adults. Perhaps they believed them only for our benefit, but as one of them said, who's to say they (the hidden people) don't exist? After all, they inhabit every folklore, as leprechauns, faeries, trolls, and what have you.

Sure an' they're agin reason. But so are a lot of other things. What with Halloween coming up, a body can't be too careful. In the meantime, don't walk under any waterfalls at night, or black cats anytime. You might get wet, or sprain your back—or something worse.

J.B.T.

Or Something 'll Getcha, Anyhow

It is said if you happen to be out on Halloween, bad things might happen to you. The full moon has also been documented to bring out the beast in man, so if the moon is full, you better watch yo' step. At the same time—

At 10:45 the other morning in London a detachment of the Queen's Household Cavalry was riding along toward Whitehall on a routine if colorful ceremonial mission when a bomb went off, scattering nails, horses, and bits of troopers over the pavement, and doubtless over the bystanders as well. At almost the same instant, a bandstand full of musical instruments and their players erupted and settled in pieces over the assembled crowd out for *eine kleine* lunchtime music in Regency Park nearby. Having watched both occasions something over a year ago, I can imagine the mess, and the only thing worse than having been a witness to the episodes would have been to be a participant. Then, too—

If you happened at about the same time to have had the misfortune to be in West Beirut, Lebanon, in any capacity except as an Israeli soldier (and

maybe that, too), you stood a good chance of having the ground under you, up to, and likely including, yourself blown away by a stray or not so stray shell or rocket. Oh, well, you say—

It can't happen here. But it has. Remember when the O'Hare Airport terminal disintegrated, along with some innocent bystanders? You have to very carefully pick your time to be any place at all. The only trouble is, to do that you need a lot more information than most of us have access to. It was on just such a bright August morning as this one that the end of the world came nearly 40 years ago for a Japanese city and a lot of its inhabitants. Somebody knew it was coming, but not the people involved. It's always the other folks that know about such things—if indeed anybody does; more often than not, nobody knows it. All of which should say something about the perversity of both human and mother nature. Furthermore—

"I beheld when he had opened the sixth seal, and lo, there was a great earthquake, and the sun became black . . . and the stars of heaven fell to the earth. . . . And the kings of earth . . . and every man . . . said to the mountains and rocks, 'Fall on us and hide us from the face of him that sitteth on the throne. . . .'"

In addition to whatever comfort, if any, you may derive from knowing that sooner or later and in one way or another every one of us will get it in the end, at the risk of being accused of rushing the season I will quote you a little New Year's poem that I have had around for 50 years or more (the author of which I forget); it applies just as well at Halloween as at New Year's—maybe even better:

I stood at the gate of the New Year,
And I said to the man at the gate
Give me a light to light my way into the unknown.
And the man said to me,
Put your hand in the hand of God,
For it is better than a light,
And safer than a known way.

J.B.T.

Safety Last

In Scandanavia everybody (well, almost) drives around, even in broad daylight, with headlights burning. It is, they say, the law. In Nashville we have a law that says if your windshield wipers need to run, your headlights must be on, too. Almost nobody pays any attention. In fact, some drive

around in a pretty good drizzle with windshield wipers off. Perhaps this is their way of acceding to the law. One can't escape the impression that more Swedes than Americans like to live. They also mind better; consequently they have a much lower rate of serious crime, too, than we do.

Why do the Swedes burn their headlights in the daytime, we asked. It is the law, they said. "It is the law," they said, "because two studies done in your country showed that the rate of accidents was significantly lowered by burning headlights in the daytime, and when accidents do occur, they are less apt to be serious, and fewer people die." The Scandanavian highways are notably safer than ours.

In Sweden, more people kill themselves deliberately than in any other country, mostly in winter. In this country, more people kill themselves than in any other country, but not deliberately (or not necessarily deliberately). We do it on our highways instead, and not necessarily in winter, either. The Scandanavians also lock up people who drink and drive, and throw away the key.

It is interesting that the Swedes are more interested than we are in protecting the lives of others while taking their own at a greater rate. Perhaps it is because in winter they can't burn their headlights in the daytime; they don't have any daytime.

It all seems to balance out. You are safer in Scandanavia than here, provided you don't decide to kill yourself in the long winter's night.

J.B.T.



An Open Letter to All Physicians With Physical Disability

The St. Paul-Ramsey Medical Education and Research Foundation has been actively involved in compiling a resource directory for physicians with physical disability. The purpose of the project is to form a voluntary group of physicians to provide information and referral services as well as support and advocacy to physicians who incur the same disability and need specific information. I became deaf seven years ago just as I was completing medical school and can readily attest to the paucity of information available to this

unique population. Existing rehabilitation programs are simply not equipped to deal with the situation.

The biggest problem we are encountering is that of identification. It is currently estimated that 4% of all physicians are not in active practice because of a physically disabling condition, and that 25% of those physicians have the potential to be rehabilitated into the active practice of medicine. In real numbers this constitutes 1% of the licensed physicians in this country or 4,500 physicians. Our goal is to identify these physicians and encourage their participation. To date we have placed advertisements in over 100 major medical journals and have had response from less than 200 physicians. In retrospect, it appears this was due to the use of inappropriate terminology in the ads. Physical disability does not imply inability. My use of the term "handicapped physician" was a misnomer since the majority of physically disabled physicians are not handicapped in their practice of medicine. I apologize for the inappropriate terminology and again ask that all physicians, active or inactive, with any type of physical disability contact me at St. Paul-Ramsey Medical and Educational Research Foundation, 640 Jackson St., St. Paul, MN 55101. We anticipate that the directory will be completed in six to eight months and at that time it will be sent to only those physicians who are listed therein. Upon receipt of your initial response, information forms will be mailed.

All physicians with physical disability, no matter how small, are encouraged to respond. Information from a doctor with even a minor disability may be of value to another doctor with multiple disabilities. The cornerstone of this project is your participation.

Frank C. Zondlo, M.D.
St. Paul-Ramsey Hospital Medical
Education and Research Foundation



Tea Acuff, age 60. Died August 25, 1982. Graduate of University of Tennessee College of Medicine. Member of Knoxville Academy of Medicine

P. Thurman Crawford, age 69. Died August 22, 1982. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

Charles Joseph Deere, age 73. Died July 24, 1982. Graduate of University of Tennessee College of Medicine. Member of Memphis-Shelby County Medical Society.

James E. Goldsberry, age 76. Died July 15, 1982. Graduate of Vanderbilt University School of Medicine. Member of Nashville Academy of Medicine.

John Roe, age 52. Died August 20, 1982. Graduate of University of Tennessee College of Medicine. Member of Smith County Medical Society.

Frank T. Rutherford, Jr., age 58. Died July 28, 1982. Graduate of University of Tennessee College of Medicine. Member of Smith County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Joel Lewis Bremer, Jr., M.D., Chattanooga
Eric Hadley Conn, M.D., Chattanooga
James M. Hinson, Jr., M.D., Chattanooga
James Darryl Ramsey, M.D., Chattanooga
Deborah D. Sendele, M.D., Chattanooga
David M. Ulin, M.D., Chattanooga

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

David Malcolm Larsen, M.D., Jackson

KNOXVILLE ACADEMY OF MEDICINE

Ronald W. Bryan, M.D., Knoxville
Stephen F. Hutchins, M.D., Knoxville

McMINN COUNTY MEDICAL SOCIETY

Sammy M. Smith, M.D., Athens

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

Thomas E. Elkins, M.D., Memphis
Sherman D. Hixson, M.D., Memphis
Engene Scobey, Jr. (student), Memphis

NASHVILLE ACADEMY OF MEDICINE

Dave A. Alexander, M.D., Nashville
Lisa T. Craft, M.D., Nashville
Deborah R. Deason, M.D., Nashville
Deborah R. Doyle, M.D., Nashville
Jerry M. Franklin, M.D., Nashville
Steve A. Hyman, M.D., Nashville
Kerry L. Kline, M.D., Nashville
William R. McDaniel, M.D., Nashville
Peter L. Rackow (student), Nashville
Charles L. Robinette, Jr., M.D., Nashville

personal news

Wahid T. Hanna, M.D., Knoxville, has been elected to represent Tennessee and seven other southeastern states on the National Hemophilia Foundation's medical and scientific advisory committee.

TMA Members Receive AMA Physician's Recognition Award

Twenty-one TMA members qualified for the AMA Physician's Recognition Award during July, 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Robert W. Adams, Jr., M.D., Nashville
Richard D. Buchanan, M.D., Nashville
Philip P. Chow, M.D., Clarksville
Harold J. Crecraft, M.D., Nashville
Shannon R. Curtis, M.D., Franklin
Herschel L. Douglas, M.D., Johnson City
Rufus J. Garrison, M.D., Murfreesboro
James H. Hickman, Jr., M.D., Lowland
Moon W. Hong, M.D., Chattanooga
Samuel E. Hunter, M.D., Memphis
Charles E. Kidd, Jr., M.D., Sevierville
Michael F. Lett, M.D., Chattanooga
Robert J. Linn, M.D., Madison
Thomas E. Mason, M.D., Nashville
Embry A. McKee, M.D., Nashville
James W. Menzie, M.D., Nashville
William J. Moss, M.D., Chattanooga
Richard A. Obenour, M.D., Knoxville
Joseph Palatinus, M.D., Nashville
Elsie V. Tomkinson, M.D., Loudon
Allen N. Williams, Jr., M.D., Bemis

national news

From the AMA's Office in Washington, D.C.

Stunning Tax Bill Stuns Physicians

President Reagan won a stunning victory with the congressional passage of a tax-increase, spending-cut bill in late August. The House vote was 226-207; the Senate vote, 52-47.

The bill—Tax Equity and Fiscal Responsibility Act of 1982—is projected to raise government revenues by \$98.3 billion over the next three fiscal years, including

\$18.3 billion in fiscal year 1983. The legislation also includes spending cuts in Medicare (\$12.8 billion over three years) and Medicaid (\$1.4 billion over three years).

The support of House Democrats proved essential to the bill's passage; only 103 of the 192 House Republicans voted for the bill. The Senate vote was split largely along party lines with nine Democrats and 43 Republicans supporting the measure.

The bill would make a number of significant changes in the nation's tax laws. Some of the highlights of the numerous changes affecting physicians follow:

Inpatient Radiology and Pathology Services

Medicare reimbursement for inpatient radiology and pathology services will be put on the same basis as Medicare payment for the services of other physicians. Reimbursement will be at 80% of the "reasonable" charges, and radiologists and pathologists will no longer be required to accept assignment for all cases.

Provider-Based Physicians

This provision calls for a differentiation between professional medical services furnished in a hospital that are directly furnished to an individual patient and that contribute to the patient's diagnosis or treatment, and those services that are a benefit to the general patient population. Services to an individual patient will be reimbursed under Part B and services to the general patient population will be reimbursed under Part A. To determine the reimbursement under Part A, the Secretary will establish a "reasonable compensation equivalent" through regulations.

Duplicate Overhead Payments for Outpatient Services

In determining "reasonable" charges for outpatient services, the Secretary is required to issue regulations to limit the "reasonable charge to a percentage of the amount of the prevailing charge for similar services furnished in a physician's office, taking into account the extent to which overhead costs associated with such outpatient services have been included in the reasonable cost or charge of the facility."

Assistant at Surgery

Reimbursement for assistants at surgery in hospitals with an approved training program will be prohibited if the training program related to the medical specialty required for the surgical procedure and a qualified individual from the hospital staff is available to assist. Exceptions will be allowed pursuant to regulations to be developed by the Secretary by Oct. 1, 1982, for the following circumstances: (1) "exceptional medical circumstances;" (2) a team of physicians is needed to perform complex medical procedures; (3) a physician of another specialty is needed for concurrent care; and (4) other circumstances deemed appropriate by the Secretary. Where an assistant at surgery is entitled to reimbursement, the Secretary is to determine the appropriate method of reimbursement.

Pensions

● *Limits on Contributions and Benefits*—Maximum contributions to a defined contribution plan would be

reduced from \$45,475 to \$30,000. Maximum annual benefits under a defined benefit plan would be reduced from \$136,425 to \$90,000. The cost-of-living adjustments for these dollar limits would be suspended for two years. Beginning in 1986, the dollar limits would be adjusted for post-1984 cost-of-living increases. Maximum benefits under a defined benefit plan would be actuarially reduced if benefits commence before age 62 (present early retirement reduction occurs if distributions take place before age 55). These provisions apply to new pension plans not in existence on July 1, 1982. For pension plans in existence on July 1, 1982, the \$30,000 and \$90,000 limitations will apply for plan years beginning in 1983. Certain transition rules will be provided to ensure that benefits already earned under an existing plan are not reduced on account of the reduced limits.

- *Loans from Retirement Plans*—As a general rule, loans from a tax-qualified or governmental pension plan would be treated as a plan distribution. An exception to this rule is that a loan would not be treated as a distribution to the extent that the loan does not exceed the lesser of \$50,000 or 50% of the present value of the vested employee benefit, but not less than \$10,000. In other words, loans from plans at any one time would be limited to \$10,000 or half of the vested benefits up to \$50,000. This exception applies only if by its terms the loan is to be repaid within five years. Loans for principal residences would not be subject to the five-year rule. Effective date: Loans made after Aug. 13, 1982 (with transition rule).

- *"Top-Heavy" Plans*—Top-heavy plans are defined as pension plans (both corporate and non-corporate) under which more than 60% of the accrued benefits or contributions are provided for key employees. A key employee is an officer, a 5% owner, a 1% owner paid over \$150,000 per year, or any of the employees owning the ten largest interests in the employer. Special plan requirements for top-heavy plans include:

- a rule limiting includible compensation to \$200,000 (adjusted for inflation). Only the first \$200,000 of an employee's compensation may be taken into account in determining contributions or benefits under the plan.

- minimum vesting schedules: An employee's right to the accrued benefit derived from employer contributions must become nonforfeitable under a vesting schedule which satisfies one of two alternative schedules provided in the bill. A plan satisfies the first alternative vesting schedule ("three-year full vesting") if an employee who has at least three years of service with the employer maintaining the plan has a nonforfeitable right to 100% of his accrued benefit derived from employer contributions. A plan satisfies the second alternative vesting schedule ("six-year graded vesting") if an employee has a nonforfeitable right to at least 20% of the accrued benefit at the end of two years of service, 40% at the end of three years of service, 60% at the end of four years of service, 80% at the end of five years of service, and 100% after six years of service with the employer. An employer could not avoid the top-heavy plan rules by establishing a plan under a

one-man corporate shell or by leasing employees from another employer. Congress has modified the impact of the *Keller v. Commissioner of IRS* decision by restricting corporations set up solely for tax-avoidance purposes.

- *Keogh Plan Limits*—Changes made have the effect of permitting a self-employed person to contribute into a Keogh retirement plan the lesser of 20% of earned income or \$30,000. The \$30,000 figure would be adjusted, after 1986, to reflect cost-of-living increases. At present the limits are 15% of income or \$15,000. Effective for plan years beginning in 1984.

- *Estate Tax Exclusion*—A ceiling would be placed on the present law's unlimited estate tax exclusion for annuities paid from qualified pension, stock-bonus or profit-sharing plans, tax deferred annuities, IRAs, and certain military retirement plans. The aggregate amount excludable from the gross estate would be \$100,000 for any decedent dying after Dec. 31, 1982.

- *Estimated Revenue Increase* for pension provisions: \$2 billion over three years.

NOTE: This is a *summary* of pension provisions. The law is complex and its provisions contain additional details from those summarized above.

Medical Deductions

Medical expense deductions would be allowed for medical costs exceeding 5% of a taxpayer's adjusted gross income, compared with the current 3%. Taxpayers' ability to include prescription drug costs greater than 1% of adjusted gross income would be repealed after 1983. In addition, the current deduction for half of health insurance premiums up to \$150 would be repealed.

FTC Exemption Stalled

A stalemate of sorts is holding up congressional action on legislation to exempt the professions, including medicine, from the jurisdiction of the Federal Trade Commission.

The exemption was approved by the Senate Commerce Committee earlier this year as part of a reauthorization of the FTC's operations. However, Committee Chairman Robert Packwood (R-OR), a foe of exemption, has not brought it up for a vote by the full Senate.

On the House side, a flat reauthorization minus any exemption has been approved by the House Commerce Committee (H.R. 6995), with the proviso that another bill (H.R. 3722) which would place a moratorium on FTC action regarding state-regulated professions, will be offered from the floor as an amendment to H.R. 6995.

Support for the exemption, strongly backed by the AMA, is growing in the House where 214 members already have endorsed the bill (H.R. 3722) providing for a moratorium on the FTC's actions against the professions.

Packwood and the House Subcommittee Chairman James Florio (D-NY), have launched a coalition drive to permit FTC jurisdiction over the professions. The

FTC's authorization is due to expire Oct. 1 and there is a chance an attempt will be made to keep the agency functioning through a continuing resolution providing operating funds if the reauthorization measures stall.

Both House and Senate action is expected shortly after the Labor Day recess.

Catastrophe Protection To Be Offered

Dropped in the hopper as an early entry in the upcoming contest next year over national health plans was an old stand-by—catastrophic—with a new twist.

The bill was introduced by House Budget Committee Chairman James Jones (D-OK) and Rep. James Martin (R-NC), a member of the House Ways and Means Committee.

Under the legislation, employers would be encouraged to offer catastrophic coverage plus providing that employees would not have to incur out-of-pocket expenses of more than \$3,500 yearly. For people not reached by such private insurance, the government would set up a Catastrophic Automatic Protection Plan (CAPP) paying all medical expenses after a specified amount of personal spending based on family income is incurred. CAPP would be administered by the Health and Human Services (HHS) Department. Benefits below the catastrophic level would be the same as those under Medicare.

The two lawmakers said the catastrophic benefit could be financed through imposing limitations on the tax deductions for the costs of providing employees health insurance. This limit would be \$100 per month per family. If it is exceeded, employees would be taxed on the surplus as if it were income. The present tax deductions for medical expenses above a certain percentage of income would be eliminated, but people could still deduct part of the cost of their premium payments.

The bill also promotes prospective payments for Medicare by allowing states and legal entities to seek a waiver from the government.

The Catastrophic Health Expense and Cost Constraint (CHECC) plan's tax features are similar to those that have been advanced in some of the pro-competition plans introduced in this Congress. The administration has said it will introduce its pro-competition proposal early next year.

Jones said he hoped CHECC will be a factor in the serious debate on the national health debate next year. He estimated the plan would save the government money, perhaps as much as \$1 billion a year.

At a news conference, Martin said "the large, unexpected expenses of illness can result in financial ruin" for people with inadequate coverage or none. "This legislation is long overdue in the effort to provide appropriate cost constraints and to provide financial assistance for medical bills for those now unprotected by private or public insurance," he said.

announcements

CALENDAR OF MEETINGS

NATIONAL

Nov. 1-4	Interstate Postgraduate Medical Association, 67th Scientific Assembly—Town & Country, San Diego
Nov. 4-6	American Cancer Society—Waldorf, New York
Nov. 4-6	Central Society for Clinical Research—Drake Hotel, Chicago
Nov. 5	Symposium—Next Decade: Changes in Sociological and Economic Status of Physicians (sponsored by South Highlands Hospital, Birmingham)—Hyatt Birmingham
Nov. 7-10	National Perinatal Association—Fairmont Hotel, Dallas
Nov. 8-13	American Epilepsy Society—Hilton Hotel, Phoenix
Nov. 9-13	American College of Preventive Medicine—Montreal
Nov. 9-13	American Society of Cytology—Hyatt Regency, Chicago
Nov. 10-14	American Association for Clinical Immunology and Allergy—Anaheim Marriott, Anaheim, Calif.
Nov. 11-14	Association of Clinical Scientists—Drake Hotel, Chicago
Nov. 14-18	American Public Health Association—Montreal
Nov. 15-18	American Heart Association—Dallas
Nov. 15-18	American Physicians Art Association—New Orleans
Nov. 17-19	AMA Congress on Occupational Health—University of South Florida, Tampa
Nov. 19-23	Gerontological Society of America—Sheraton Boston, Boston
Nov. 28-Dec. 3	Radiological Society of North America—McCormick Place, Chicago
Dec. 2-3	American College of Chemosurgery—New Orleans
Dec. 2-4	International Symposium on Medical Virology (sponsored by Dept. of Pathology, Univ. of California-Anaheim)—Disneyland Hotel, Anaheim
Dec. 4-9	American Academy of Dermatology—New Orleans
Dec. 5	American Society for Dermatologic Surgery—New Orleans
Dec. 9-12	American Academy of Psychoanalysis—Del Coronado, San Diego
Dec. 15-19	American Psychoanalytic Association—Waldorf Astoria, New York
Dec. 18- Jan. 1	Fifth Annual Winter Seminar, Selective Reviews in Medicine (sponsored by Dade County, Fla., Medical Assoc.)—Aspen, Colo.

STATE

Nov. 2-5	Tennessee Academy of Family Physicians—Gatlinburg
----------	---

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Preventive Medicine	William Schaffner, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hancikel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

Nov. 4-6	American Society for Microbiology Fall Meeting, Scientific Sessions
Nov. 17-19	Tennessee Public Health Association Annual Meeting, Scientific Sessions
Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
Kermit R. Brown, M.D.	
Qamar A. Kahn, M.D.	
Chest Disease	Joseph M. Stinson, M.D.
Paul A. Talley, M.D.	
Edward A. Mays, M.D.	
Dermatology	Thomas W. Johnson, M.D.
David Horowitz, M.D.	
Gastroenterology	Ludwald O. P. Perry, M.D.
Buntwal M. Somayaji, M.D.	
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
Gregory Samaras, M.D.	
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
John C. Ashhurst, M.D.	
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
Ira D. Thompson, M.D.	
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

- Nov. 11-12 Pain Conference
Nov. 12-13 Rheumatology (cosponsored with Baptist Hospital)
March 3-5 Pituitary Disorders (cosponsored with Baptist Hospital)
March 20-26 16th Annual Family Practice Review Course

Knoxville

- Nov. 6-7 Loss Prevention

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

EAST TENNESSEE STATE UNIVERSITY

- Nov. 12-14 Cardiology in the Aging
Nov. 16-17 Ellis Orthopaedic Lectureship: Total Knee Replacement

For information contact Department of Continuing Medical Education, Box 19660A, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

IN SURROUNDING STATES

UNIVERSITY OF LOUISVILLE

- Nov. 4-5 Infections in the Newborn (16th Annual Newborn Symposium)

For information contact Billy F. Andrews, M.D., Department of Pediatrics, University of Louisville School of Medicine, Louisville, KY 40292, Tel. (502) 588-5753.

BOWMAN GRAY

- Nov. 18-20 Comprehensive Breast Disease Symposium
Dec. 9-11 Advanced Pediatric Real-Time Ultrasound Seminar

For information contact James F. Martin, M.D., Postgraduate Course in Medical Sonics, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem, NC 27103, Tel. (919) 748-4505.

WASHINGTON UNIVERSITY

- Nov. 18-20 Clinical Allergy for the Practicing Physician

For information contact Loretta Giacoletto, Office of CME, Washington University School of Medicine, Box 8063, St. Louis, MO 63110, Tel. (314) 454-3873.

PHYSICIANS NEEDED

IMMEDIATE NEED FOR A GENERAL SURGEON. Must be board certified or board eligible. Group practice setting with eleven established multi-specialty practitioners. Above average income. New fully accredited 200-bed acute care facility with four surgical suites and a progressive surgical intensive care unit. Highly trained support staff.

IMMEDIATE NEED FOR AN ORTHOPEDIC SURGEON. Must be board certified or board eligible. Multi-specialty practice setting or solo. Excellent opportunity and above average income. New fully accredited 200-bed acute care facility with four surgical suites and a progressive surgical intensive care unit. Highly trained support staff.

IMMEDIATE NEED FOR A CARDIOLOGIST. Must be board certified or board eligible. Group practice setting or solo. Excellent opportunity and above average income. New fully accredited 200-bed acute care facility with progressive management affiliated with national organization. Highly trained support staff and rewarding practice opportunity.

Located halfway between Memphis and St. Louis in the beautiful foothills of the Ozarks. Outdoor sports abundant. A growing community, medically and commercially.

Contact:

Hospital Administrator
Lucy Lee Hospital
2620 N. Westwood Blvd.
Poplar Bluff, MO 63901
314/785-7721

Principles for Voluntary Medical Peer Review

An Interim Report

Current AMA Policy

At the 1980 Interim Meeting, the House of Delegates adopted the following statement: "The current Association policy shall be to continue professionally directed efforts to ensure that care provided to patients is of high quality, appropriate duration and is rendered in an appropriate setting at a reasonable cost and to encourage the elimination of all government directed peer review programs, including PSRO." In view of this charge, the Council on Medical Service (CMS) began to examine alternative quality assurance mechanisms and methodologies now available and operating under professional direction. The Council identified a series of review models, including both hospital-based and ambulatory-based programs.

At the 1981 Annual Meeting, the House adopted Substitute Resolution 4 which further defined Association policy in support of nongovernmental peer review programs by calling for the AMA to take a leadership role in collaboration with all units of the federation in developing and promoting effective means of physician assessment of the quality of medical care. Furthermore, the House reiterated that physicians should maintain control and direction over peer review, which should be done only by physician-sponsored organizations, regardless of the funding source.

The fifth "resolved" from Substitute Resolution 4 was referred to the Board of Trustees and subsequently to the CMS for further study. The fifth "resolved" of Substitute Resolution 4 stated: "That since the quality assurance program for hospitals as devised by the Joint Commission on Accreditation of Hospitals and medical care foundations utilized effectively by many states are proven mechanisms for providing physician peer review, the House of Delegates requests the Board of Trustees to investigate expanded use of these methods and assist actively in the formation of medical care foundations, or similar organizations, in states where they do not now exist, if requested by the state society." Accordingly, at its August meeting, the CMS met with representatives from the American Association of Foundations for Medical Care. The Council learned of and is impressed by the nature and extent of foundation peer review activity at the present time, and has taken into

consideration foundation-sponsored activities in developing this report. The Council believes, however, that it would not be appropriate at this time to recommend foundation type review as *the* mechanism of choice until more generic peer review principles have been adopted.

The quality assurance program for hospitals under the Joint Commission on Accreditation of Hospitals has also been examined. The Council has been advised that the JCAH is currently reviewing all of its standards for hospitals, including the quality and appropriateness elements in each standard and will keep abreast of the status of this review.

In summary, the Council recognizes that a variety of peer review systems already exists across the country. In some areas where government-sponsored review organizations are being terminated, opportunities will exist for the development of new peer review mechanisms. However, other sections of the country may elect to maintain their present system of peer review, and reevaluate their structure and mode of operation in light of the increasing demand and changing needs for review services by local and state government, business and insurers. In this pluralistic environment of peer review systems, the Council believes that the Association can best fulfill a leadership role through the development and dissemination of "medical peer review principles" that are generic and therefore apply to any review system. Accordingly, the Council has developed the following set of principles for voluntary medical peer review, and believes that each of these principles should be found in any organization or system which has as its objective the assessment of the quality of medical care.

Definition of Medical Peer Review

In 1971, the Council on Medical Service developed a definition of peer review. That definition as adopted by the House of Delegates (A-71) is as follows: "Peer review, the evaluation by practicing physicians of the quality and efficiency of services ordered or performed by other practicing physicians, is the all-inclusive term for medical review efforts. Inpatient hospital and extended care facility utilization review; medical audit; ambulatory care review and claims review are all aspects of peer review." The Council believes that this definition continues to be appropriate.

It should be noted that this concept is distinct from the concept of review and supervision by physicians of

This is AMA Council on Medical Service Report A, submitted to the House of Delegates at its Interim Meeting in December, 1981. Past House Action: A-81:213; I-80:149-152.

medical care provided by allied health personnel. That concept is also supported by AMA policy.

Principles for Voluntary Medical Peer Review

Physicians have traditionally had the ethical and professional obligation to assure the quality of the medical care services they render to patients and more generally to the public at large. The *Current Opinions* (1981) of the AMA's Judicial Council states that "medical society ethics committees, hospital credentials and utilization committees, and other forms of peer review have been long established by organized medicine to scrutinize a physician's professional conduct. At least to some extent, each of these types of peer review can be said to impinge upon the absolute professional freedom of physicians. They are, nonetheless, recognized and accepted. They are necessary. They balance the physician's right to exercise his medical judgment freely with his obligation to do so wisely and temperately." Thus, the obligation to assure the quality of medical care services rendered to patients remains the comprehensive and underlying concept of any set of principles for medical peer review.

These principles are applicable to any medical peer review system.

1. Medical peer review is an organized effort to evaluate and analyze medical care services delivered to patients and to assure the quality and appropriateness of these services. Peer review exists to maintain and improve the quality of medical care.

Any medical peer review system must have structure and organization to ensure consistency in evaluation. Such a system of review can be as elaborate as a national review program or as simple as a hospital tissue committee. Medical peer review should encompass all medical care delivered to patients. The review process should employ similar procedures for all patients, regardless of the payor. Medical peer review exists to maintain and achieve demonstrable improvements in the overall quality of medical care. Other objectives including research in medical care are secondary.

2. Medical peer review is a local process.

The implementation of any medical peer review system should be carried out at the local medical community level, allowing for the necessary variation and flexibility of review systems which can accommodate the uniqueness of each locale. Medical community, in this context, could connote a specific geographic area or any natural medical service area.

3. Physicians are ultimately responsible for all peer review of medical care.

The responsibility for medical peer review is that of the physician and cannot be delegated to others. However, any part of the task of performing the review may be delegated, at the discretion of the local peer review organization.

4. Physicians involved in peer review should be representatives of the medical community;

participation must be structured to maximize the involvement of the medical community. Any peer review process must provide for consideration of the views of individual physicians, groups of physicians or institutions under review.

Each physician who participates in the peer review process serves as a representative-at-large of the general population of physicians in the community. Generally, "peer" review is achieved when physicians of any specialty review the medical care rendered by other physicians. However, there may be instances where consultation with specialists or subspecialists is necessary. Any peer review system should be designed to maximize the participation of all physicians, and a process that provides for participation on a rotating basis is desirable. Any peer review process should incorporate an opportunity for dialogue between the reviewers and the reviewed. Therefore, the process should include the views of individual physicians or groups of physicians under review. In this context, "institutions under review" refers to the medical services delivered to patients in the institutional setting.

5. Peer review evaluations are based on appropriateness, medical necessity and efficiency of services to assure quality medical care.

Appropriateness is a broad term that connotes that the medical care provided is suitable for a particular episode, condition or setting. In evaluating medical necessity, it is important to specify what "need" is being considered, by what criteria the need is to be established and what effect the service has on the patient. Efficiency in medical care can be defined as the relationship between resources expended in a given case and those expended in a large number of similar cases in which the outcomes were acceptable. Evaluations based on efficiency will inherently include considerations of the quality of care provided. All of these features enhance the accountability of the medical peer review process to the public and the profession.

6. Any system of medical peer review must have established procedures.

Procedures constitute the rules by which an organization operates. A system of medical peer review must have standardized operating procedures which are developed locally by physicians. These procedures should ensure that the process is consistent and equitable.

7. Peer review of medical practice and the patterns of medical practice of individual physicians, groups of physicians and physicians within institutions is an ongoing process of assessment and evaluation.

Peer review is a continuing process of investigating, identifying and then correcting inappropriate patterns of medical practice. This systematic approach may be concurrent or retrospective, using chart or claims based review. The results of peer review within an institution should be evaluated by physicians of that medical community, as defined in Principle No. 2, but outside of the facility under review.

8. Peer review is an educational process for physicians to assure quality medical services.

Peer review exists to maintain and achieve demonstrable improvements in the quality of medical care. Peer review is also an educational process for physicians which simultaneously fulfills an obligation to the patient to provide the highest possible quality care. Medical peer review should help to improve continuing medical education by linking the results of review to specific educational activities. This process should allow each physician to compare his patterns of practice with his peers and should provide an opportunity for self-improvement. Every physician should participate in medical peer review activities.

Unfortunately, some physicians may not respond to education or opportunities for self-improvement. However, recognizing the sensitivities of peer review at this stage in the process, every attempt should be made to encourage the physician's further education and improvement. According to the *Current Opinions* (1981) of the AMA's Judicial Council, "a physician should expose, without fear or favor, incompetent or corrupt, dishonest or unethical conduct on the part of members of the profession. Questions of such conduct should be considered, first, before proper medical tribunals in executive sessions or by special or duly appointed committees on ethical relations, provided such a course is possible and provided, also, that the law is not hampered thereby."

9. Any peer review process must protect the confidentiality of medical information obtained and used in conducting peer review.

An effective peer review process requires maintaining the confidentiality of patient, physician and hospital-specific data. Maximum safeguards must be placed on medical information generated by the deliberations of peer review meetings in order to protect the integrity of the peer review process. In the event that no state statutory mechanisms exist to protect this information from disclosure, every attempt should be made to get such statutes enacted.

The Association has been very active in this area. The Joint Report of the Board of Trustees and the CMS, "Evaluation of AMA Policy on Confidentiality," is also before the House at this session. That report describes in considerable detail Association policy on confidentiality, and specifically, the Association's ongoing attempts through model legislation and other means to protect the confidentiality of information generated in the peer review process.

Conclusion

In developing these principles for medical peer review the Council recognizes that peer review is a complex, multifaceted process which may require differing approaches in individual communities. These principles in their entirety are intended to be a reference point in the design of such peer review systems.

The Council intends to continue to develop materials to assist physicians in fulfilling their responsibility for peer review and will make further recommendations on the subject of peer review.

Graduate Medical Education National Advisory Committee Final Report

At its 1981 Annual Meeting, the House of Delegates referred Resolution 117 to the Board of Trustees. This resolution called on the AMA to undertake validation of the methods used by the Graduate Medical Education National Advisory Committee (GMENAC) to project physician manpower requirements and initiate additional studies outlined in the GMENAC report. The following report contains a critical review of the GMENAC project and describes further research on physician manpower planned by AMA.

This is AMA Board of Trustees Report Z, submitted to the House of Delegates at its Interim Meeting in December, 1981. Past House Action: A-81:243.

Background

In September 1980, GMENAC issued its final report. The report consists of seven volumes, which include a general summary, commentaries from GMENAC members on the study, and a technical appendix. The major conclusion of the report is that by the year 1990 there will be 70,000 more physicians in the United States than "required." Although the majority of specialties are projected to have surplus manpower, some medical specialties, such as psychiatry, are projected to have shortages. The report's conclusions on surpluses or shortages of medical manpower are derived from a method which compares estimates of requirements for physicians' services with estimates of future supplies of physicians.

The GMENAC Method: Critique

After careful study of the entire GMENAC report, the American Medical Association seriously questions the value of the kind of approach employed by GMENAC. The GMENAC study, or any other projections method, will offer only crude approximations of the supply of and demand for physicians' services at some future point. Such projections cannot provide a sound basis for policies that will have significant consequences for health care delivery in the United States.

In the GMENAC report itself, two models form the basis for projections of physician manpower and needs for physicians' services to the year 1990: (1) a physician supply model and (2) a physician requirements model. The physician supply model was developed by gathering data on medical school graduates from 1961-1975, analyzing graduate medical education paths and career outcomes, and estimating the supply and distribution of physicians in the year 1990 based on the present supply and distribution of physicians. Two factors militate against merely assuming that current characteristics of physician distribution and supply will hold in the future. First, personal traits of medical students and their preferences for medical practice change. Second, market demand for specific medical specialties will alter medical students' perceptions of suitable specialties for practice.

The physician requirements model was developed by gathering briefing materials on disease morbidities for each physician specialty, convening a "modified Delphi Panel" for each medical specialty, and producing a physician requirements estimate for each specialty. Two problems with the physician requirements estimation process undermine the value of the panel's findings. First, the assumed nature of the patient population and the medical environment in 1990 are not specified. Second, subjective adjustments of physician requirements play a large role in the final determinations of the panels. There is no clear a priori reason for these adjustments, some of which are substantial.

Conclusions

Manpower studies like that performed by GMENAC and others are useful and provide a body of information to both public and private policymakers or anyone looking at health manpower. The Association can support many of GMENAC's recommendations. However, *major difficulties* remain with many of the recommendations, with the *methodology*, and with the *assumptions* that underpin the entire GMENAC effort. Moreover, the *potential misuse* of the requirements estimates, despite repeated assertions that they are tentative, subject to a wide margin of error, and in need of continuous critical evaluation, is significant.

GMENAC developed sophisticated mathematical models to estimate physician supply and requirements. These models, like all forecasting models, are *highly sensitive* to changes in assumptions, data, and priorities. Past experience has demonstrated that long-term medical manpower projections are extremely difficult to make, given changing economic trends, technolog-

ical innovation, a mobile population and a rising demand for services.

It should be noted that acceptance of GMENAC's major premise—that there will be a surplus of physicians in 1990 and that action must be taken to alleviate that surplus—will prevent any opportunity for competition to correct certain problems in the medical marketplace.

The Board and staff must continue to aggressively analyze health manpower issues and make recommendations to the House, as appropriate. The Association has an obligation to make the results of these studies available to appropriate public and private policymaking bodies.

The medical profession must not wait passively for market forces to operate. Organized medicine must actively assist physicians in identifying geographic areas and specialties requiring physicians and in responding to those demands. Similarly, AMA and other organizations will encourage communities in their efforts to attract physicians and make medical practice in their areas both feasible and practical.

Editor's Note: This report was adopted in lieu of Resolution 117 (A-81).

PRACTICE FOR SALE

Solo General Practitioner wishes to sell practice to retire. Lab, x-ray, EKG with treadmill, moist heat, ultrasound. East Tennessee city across from modern hospital. Great profits yearly. My residence in fashionable neighborhood is also for sale.

For information write Ad Box A-1-82, TMA Journal, 112 Louise Ave., Nashville, TN 37203.

GENERAL PHYSICIAN NEEDED

Immediate opening for Board certified, general medical staff physician for accredited developmental center for mentally retarded. Near Smokey Mountains in Greeneville, TN; mild climate year around; large metro shopping area within one hour. Excellent fringe benefits; salary negotiable depending on experience and qualifications; paid professional liability insurance.

Contact G. W. Oden, M.D., Director Medical Services, Greene Valley Developmental Center, Greeneville, TN 37743. Call collect (615) 639-2131, ext. 333.

The State of Tennessee is an Equal Opportunity Employer

These reports bring you information on what the AMA is doing, on behalf of the profession and the public, to influence decisions that will affect health care in the next decade and beyond.

health
issues
of the
80's

competition

The word "competition" applied to the health care delivery system may be perceived as an anathema by some physicians who, in the past, have equated the concept of competition with high-pressure, wheeler-dealer business rivals. Or competition might have evoked thoughts of Olympic contestants, honorable orators, or chess champions. But the phrase, "competition in the medical care marketplace," until recently, was not often used.

Today, competition forms the cornerstone of some legislative and administrative proposals aimed at reducing health care utilization and, consequently, reducing costs. The premise, like many economic concepts, seems simple: if patients (the consumers) have greater participation in choosing from among several health care plans with different costs and different benefits, they will select appropriate plans and use services more prudently. Included in the premise is the idea that those connected with providing and financing care—physicians, hospitals, insurers and others—will compete to find the most cost-effective ways of providing that care. The extent to which actual behaviors will change to meet predictions is unknown.

The American Medical Association supports many of the principles of competition proposals—but we have grave concerns about some aspects of certain proposals.

About a year ago, the AMA House of Delegates adopted a report containing principles of evaluating competition legislation. The report named six basic desirable concepts: employers should offer multiple choice of plans; plans should provide at least certain minimum benefits; equal employer contributions, regardless of plan, should be required; nontaxable rebates to employees should be made when plans costing less than the amount of the employer contribution are selected; a maximum nontaxable contribution limit (adjustable for inflation) should be placed on the amount(s) of the premiums paid by an employer that are eligible for tax deductions as business expense; and unqualified plans should not be eligible for tax deduction.

The foregoing concepts are basic to the competition proposals now being considered by Congress and the Administration. However, some legislative initiatives before the Congress also go far beyond these and could create an adverse effect on our health delivery system. The AMA opposes any legislation that would: (1) increase federal involvement in regulation of health care delivery; (2) merely replace existing programs of regulation with yet another set of expensive and complicated dictates; or (3) require undesirable restructuring of our health system. The AMA believes, also, that any new program should be introduced on a limited basis until it has been tested and proved effective.

While many economic theories appear reasonable on paper, human behavior does not always mirror theory. Results may not match expectations. Radical changes in health care delivery should be avoided, as should any proposals that would serve to ration or lower the quality of health care available to the American people.

The American Medical Association, reflecting the concern of its members, will continue to maintain a careful watch on legislative proposals affecting health care and support only those that show the promise of practicality.

Such leadership requires your support. The larger our membership (now nearly 240,000) the greater our influence, and our strength, as the only representative for all of medicine.

For details on how to join, contact your state or county medical society or the Division of Membership, American Medical Association, 535 North Dearborn, Chicago, Illinois 60610, (312) 751-6196.



Cervical Cancer in Two Southern Appalachian Counties

ROBERT C. DONALDSON, M.D., and DILLARD M. SHOLES, JR., M.D.

Sullivan County, Tennessee, and Scott County, Virginia, are contiguous counties served by the Holston Valley Hospital and Medical Center in Kingsport, Tenn., a community hospital affiliated with the Quillen-Dishner College of Medicine, East Tennessee State University. Located in Southern Appalachia, a region of comparatively high mortality from cervical cancer, Sullivan County and Scott County are very different in population distribution, economic base, affluence, and availability of medical care. The two counties seemed to offer a convenient model for the study of aspects of the epidemiology of cervical cancer in non-metropolitan areas. This preliminary paper represents the beginning of our examination of cervical cancer in Sullivan and Scott Counties.

Profiles of Sullivan County, Tennessee, and Scott County, Virginia

Sullivan County, with a population of about 144,000, covers an area of 349 square miles in upper East Tennessee. Several heavy industries, including chemical manufacturing plants, a mu-

nitions factory, and a paper plant, are located along the Holston River, which runs through Sullivan County. These industries provide professional and blue-collar jobs for a large percentage of the Sullivan County workforce.

Sullivan County includes two small cities, Kingsport and Bristol, with populations of 32,000 and 24,000, respectively. About 40% of the county's population lives in one of these cities. The other 60% live in suburban or rural settings. The overall population density in the county is 349 persons per square mile.

The median household effective buying income (an indicator developed by *Sales and Marketing Magazine*) in Sullivan County is \$16,842. Sullivan County has three major hospitals (two in Kingsport, one in Bristol), one small hospital in Kingsport, and three Public Health Department offices. Physicians of all medical specialties serve Sullivan County.

Across the state line from Sullivan County is Scott County, a rural coal-mining area with a population of about 25,000. The population density is 46.5 persons per square mile, or about one eighth that of Sullivan County. The population centers of Scott County are six small towns ranging in population from 89 (Clinchport) to about 2,500 (Gate City).

The median household effective buying income for Scott County is \$12,264, about \$4,600 less than that for Sullivan County. Scott County

From the Department of Obstetrics and Gynecology, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, Tenn.

Presented at the annual meeting of the Western Association of Gynecologic Oncologists, Santa Fe, N.M., May 19-21, 1982.

Reprint requests to Department of Obstetrics and Gynecology, Quillen-Dishner College of Medicine, ETSU, P.O. Box 19570A, Johnson City, TN 37614 (Dr. Donaldson).

has no hospital and few physicians. It is served by one Public Health Department office, one privately owned clinic, and one National Health Service Corps clinic.

Mortality from Cervical Cancer

In general, the Southern Appalachian region contains some of the highest death rates from cervical cancer in the country.¹ The National Institutes of Health report of cancer mortality by county for the period 1950 to 1969² indicates a nationwide age-adjusted mortality from cervical cancer among white women of 7.79 per 100,000; among non-white women, 18.92. In Sullivan County the age-adjusted mortality for that 20-year period was 11.9 per 100,000 for white women and 23.7 per 100,000 for non-white women. These rates are significantly higher, statistically, than the nationwide rates. In Scott County during the 20-year period from 1950 to 1969, the age-adjusted mortality from cervical cancer among white women was 7.7 per 100,000—not statistically different from the nationwide rate.

According to the bureaus of vital statistics in the respective states, during the more recent 20-year period from 1961 to 1980, there were 113 deaths attributed to cervical cancer in Sullivan County and 20 in Scott County. The crude annual death rates for women aged 18 years and older were virtually identical for the two counties—10.2 for Sullivan County and 10.3 for Scott County. The number of deaths from cervical cancer in a given year during the past two decades was variable, in Sullivan County ranging from 2 to 10, and in Scott County from 0 to 4.

Cases of Cervical Cancer Diagnosed Between 1960 and 1981

Because of the difference in population structure, economic factors, and access to medical care in Sullivan and Scott Counties, we wanted to know if there was a difference in the early detection of cervical cancer in the two.

Cases of cervical cancer were located by reviewing the tumor registry at Holston Valley Hospital and Medical Center. We expected that most all treated cases from Scott County and many of the cases from Sullivan County would have been seen at that hospital.

The tumor registry yielded a total of 415 cases of cervical cancer, including carcinoma-in-situ, in the two counties from 1960 to 1981, 346 of them

from Sullivan County, and 69 from Scott County. The number of cases diagnosed and reported to the tumor registry in a given year ranged from 3 to 34 for Sullivan County and from 0 to 9 for Scott County. The registry was most active during the mid-1970s. We estimate that the tumor registry contains perhaps one third to one half of all cases of cervical cancer seen at Holston Valley Hospital and Medical Center between 1960 and 1981.

For both counties the great majority of cases of cervical cancer were detected at stage 0 (in situ) or stage IA (microinvasive) (Table 1). Most of the invasive carcinomas were also detected relatively early.

For purposes of further analysis, stages 0 and IA were grouped, as were stages IB through IV (Table 2).

Age Distribution of Cervical Cancer Cases

Cervical cancer patients from Sullivan County ranged in age from 18 years to 84 years (Table 2). Among those diagnosed at stage 0 or IA, ages ranged from 18 to 79. The distribution was somewhat skewed; although the mean age was 34.9 years, over 63% of patients with stage 0 or IA disease were under 35 years old. The median age was 32 years. Among those diagnosed at stage IB or beyond, ages ranged from 25 to 84. The mean age in this group was 50.4 years.

Cervical cancer patients from Scott County diagnosed at stage 0 or IA ranged in age from 21 to 90 (Table 2). The mean age was 37.8 years, but almost 60% of the patients diagnosed at stage 0 or IA were under 35 years old. The median age

TABLE 1

CASES OF CERVICAL CANCER DIAGNOSED BETWEEN 1960 AND 1981 IN SULLIVAN COUNTY, TENNESSEE AND SCOTT COUNTY, VIRGINIA*

Stage	Sullivan County	Scott County
0	294	53
IA	3	2
IB	36	8
IIB	8	3
III	1	1
IV	1	0
Unknown	3	2
TOTAL	346	69

*Recorded in the Tumor Registry at Holston Valley Hospital and Medical Center, Kingsport, Tenn.

was 32 years, the same as that of the comparable group from Sullivan County. Among patients diagnosed at stage IB or beyond, ages ranged from 39 to 79, with a mean age of 58.4 years.

A comparison of the age distribution in the cervical cancer populations from Sullivan and Scott Counties showed that the apparent differences in mean age between the two were not statistically significant (Table 2), but in each county, the difference in mean age between the group diagnosed at stage 0 or IA and the group diagnosed at stage IB or beyond was statistically significant. This is consistent with many observations that carcinoma-in-situ is more prevalent in a younger population and invasive carcinoma is more prevalent in an older population.

Stage of Cervical Cancer at Diagnosis

Among Sullivan County cervical cancer patients, 85.8% were diagnosed at stage 0 or IA; 14.2% were diagnosed at stage IB or later, whereas among Scott County patients, 79.7% were diagnosed at stage 0 or IA; 20.3% at stage IB or later. Statistical comparison showed that the small apparent difference between the two groups was not statistically significant.

We were surprised to see that Scott County's diffuse rural population with much less convenient access to medical care was apparently being screened for cervical cancer as effectively as Sullivan County's more concentrated and medically better served population.

To further describe the populations of Sullivan County and Scott County cervical cancer patients, we looked at their medical insurance sta-

TABLE 3

PERCENT OF PATIENTS CARRYING MEDICAL INSURANCE

	Percent Insured	Percent on Medicare or Medicaid or Not Insured
Sullivan County		
All Patients	61.86	38.14
Stages 0 and IA	65.86*	34.14
Stages IB to IV	38.10*	61.90
Scott County		
All Patients	52.54	47.46
Stages 0 and IA	56.52**	43.48
Stages IB to III	38.46**	61.54

*The difference in percent insured for the two groups of Sullivan County patients is statistically significant ($P<0.001$).

**The difference in percent insured for the two groups of Scott County patients is not statistically significant ($P<0.05$).

tus, using this as an easily acquired indirect indicator of economic status and accessibility of medical care (Table 3). We could determine the insurance status of 291 of the 346 Sullivan County cervical cancer patients and 59 of the 69 Scott County patients.

Among the Sullivan County patients, 61.9% carried insurance from a private company, either group or individual policies. The remaining 38.1% were on Medicare, Medicaid, or other welfare program, or had no insurance. Among Scott County patients, 52.5% were privately insured. The apparent difference between Sullivan County and Scott County patients was not statistically significant.

Among Sullivan County patients diagnosed at stage 0 or IA, 65.9% carried insurance; among those diagnosed at stage IB or later, only 38.1% were privately insured. This difference was statistically significant.

A similar trend was observed among the Scott County patients, but the difference was not statistically significant (the much smaller sample from Scott County is a detriment). Among those diagnosed at stage 0 or IA, 56.5% were insured; only 38.5% of those diagnosed at stage IB or later were insured.

Again, the populations of Sullivan County and Scott County did not differ from each other, but within each county, patients diagnosed at an earlier stage differed from those diagnosed at a later stage. Patients whose disease was discovered at stage 0 or IA were more likely to be insured than were patients diagnosed at later stages.

Conversely, patients who had medical insurance were more likely than those without private

TABLE 2

AGES OF PATIENTS AT TIME OF DIAGNOSIS OF CERVICAL CANCER

	Mean (Years)	Standard Deviation	Range	N
Sullivan County				
Stages 0 and IA	34.86*	11.09	18-79	295
Stages IB to IV	50.41*	14.33	25-84	49
Scott County				
Stages 0 and IA	37.82**	15.49	21-90	55
Stages IB to III	58.43**	11.54	39-79	14

*The difference in the mean age of the two groups of patients from Sullivan County is statistically significant ($P<0.05$) by student's t-test.

**The difference in the mean age of the two groups of patients from Scott County is statistically significant ($P<0.05$) by student's t-test.

CERVICAL CANCER/Donaldson

insurance to be diagnosed at an earlier stage (Table 4). Among Sullivan County cervical cancer patients who carried insurance, 91.1% were diagnosed at stage 0 or IA. Among those on Medicare or Medicaid or without insurance, only

76.6% were diagnosed at stage 0 or IA. This difference was statistically significant. Among Scott County patients, 83.9% of those who were insured were diagnosed at stage 0 or IA, compared to only 71.4% of the uninsured patients. This difference was not statistically significant, but it follows the trend seen in the Sullivan County patients—those who carry medical insurance were more likely than the uninsured to be diagnosed early, a result that does not surprise us.

Our initial look at cervical cancers in Sullivan County, Tennessee, and Scott County, Virginia, shows little difference in the characteristics of the cervical cancer populations of the two counties, despite the differences in population distribution, economic base, affluence, and availability of medical care. A comprehensive study is in order and will likely shed more light on the situation.



TABLE 4
STAGE OF CERVICAL CANCER AT THE TIME OF DIAGNOSIS
FOR INSURED AND UNINSURED PATIENTS

	Stages 0 and IA (Percent)	Stages IB to IV (Percent)
Sullivan County		
All Patients	85.84	14.16
Insured	91.11*	8.89
Not Insured	76.58*	23.42
Scott County		
All Patients	79.71	20.29
Insured	83.87**	16.13
Not Insured	71.43**	28.57

*The difference in percent of patients diagnosed at stages 0 or IA for insured and uninsured patients from Sullivan County is statistically significant ($P<0.001$).
**The difference in percent of patients diagnosed at stages 0 or IA for insured and uninsured patients from Scott County is not statistically significant ($P<0.05$).

REFERENCES

1. Mason TJ, McKay FW, Hoover R, et al: *Atlas of Cancer Mortality for U.S. Counties: 1950-1969*. US Dept. of Health, Education, and Welfare publication No. (NIH) 75-780. Government Printing Office, 1975.
2. Mason TJ, McKay FW: *U.S. Cancer Mortality by County: 1950-1969*. US Dept of Health, Education, and Welfare publication No. (NIH) 74-615. Government Printing Office, 1973.

APRIL 1983						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NOTES					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
			TMA 148TH ANNUAL MEETING Opryland Hotel—Nashville			
17	18	19	20	21	22	23
24	25	26	27	28	29	30

Fibromuscular Dysplasia in Alport's Syndrome

L. B. HUDGINS, M.D., and J. P. LIMBACHER, II, M.D.

Introduction

Alport's syndrome is the most common hereditary nephritis leading to end-stage renal disease. Over 150 separate kindreds have been described. In 1927, Alport described the association of nephritis and deafness in a family previously reported by Guthrie in 1902.¹ Since then, variants of the syndrome have included ocular defects, abnormal thrombopoiesis, and aminoaciduria.²

Case Report

A 33-year-old man was admitted to the hospital with a recorded blood pressure of 240/130 mm Hg. He was asymptomatic. He last saw a physician 16 years ago, when he was diagnosed as being nephritic, but he was normotensive, and no investigation of his renal disease was done nor any treatment given. He reported a 15-year history of hearing loss and decreased visual acuity of the right eye. The family history included a deaf brother on maintenance hemodialysis who died at 38 years of age. Two cousins have "Bright's disease," one of them a woman with hearing loss. There is no family history of hypertension.

Physical examination revealed a blood pressure of 240/130 mm Hg in both arms without postural changes. Anterior lenticonus affected the right eye. Moderate bilateral sensorineural hearing loss was confirmed by audiometry. Cardiac examination showed a hyperdynamic precordium. The peripheral vascular examination was normal. No abdominal, hypochondrial or flank bruits were present. Chest roentgenogram and ECG were normal. Urinalysis showed a trace of protein with 10 to 20 RBC/HPF. Serum BUN was 34 mg/dl, creatinine 4.9 mg/dl, and potassium 4.9 mEq/liter. A 24-hour urine collection for creatinine clearance was 19 cc/min with protein 800 mg, sodium 100 mEq, and potassium 55 mEq. A DPTA renal scan suggested decreased renal function bilaterally with a 20-second delay in perfusion to the right kidney. Renal angiograms (Fig. 1A) demonstrated a 98% stenosis of the left renal artery just distal to its origin. The stenosis was 1 cm in length and typical of fibromuscular intimal hyperplasia. Selective arterial contrast injection into the right kidney showed a 70% stenosis of the lower pole renal artery and 10% stenosis of the upper pole branch. The left kidney measured 8.8 cm in length, and the right kidney 7.7 cm. Selective

TABLE 1
PLASMA RENIN ACTIVITY*

	Predilatation	Postdilatation
Blood pressure	200/115	150/90
Right renal vein	3.45	.68
Left renal vein	21.28	1.74
Inferior vena cava:		
Above renal veins	5.74	2.4
Below renal veins	3.36	1.3
Renin ratio (L/R renal vein)	6.1	2.5

*ng cc/hr.

renal vein renins lateralized renin hypersecretion from the left kidney (Table 1).

During the hospital course, the patient's blood pressure remained poorly controlled (180/110 mm Hg) on metoprolol, 100 mg two times a day; hydralazine, 50 mg four times a day; and furosemide, 40 mg daily.

Percutaneous transluminal angioplasties (PTA) of the right lower pole renal artery and left main renal artery were performed. The right arterial branch was selectively catheterized by a guidewire. A 5-French polyethylene catheter was passed over the wire through the stenosis, resulting in a 5-French size dilatation (Fig. 2).

Left renal artery dilatation was accomplished using a 7-French 4-mm diameter balloon catheter, 2 cm in length. Dilatation produced a 3-mm opening through the stenosis with good flow (Fig. 1B). Four hours after the procedure the patient's blood pressure stabilized at 150/90 mm Hg. Metoprolol was discontinued. Renal vein renin determinations obtained after PTA showed a drop in renin levels (Table 1). Serum creatinine remained stable after the procedure and decreased to 3.2 mg/dl. The patient lost weight due to a 4-liter diuresis during the 24 hours following angioplasty. A serum creatinine three months later was 3 mg/dl, with a creatinine clearance of 25 cc/min. The blood pressure is controlled (150/90 mm Hg) with hydralazine 50 mg, four times a day.

Discussion

Severe or accelerated hypertension has not been described as part of the clinical spectrum of hereditary nephritis. Thus, discovery or development of severe hypertension in hereditary nephritis requires a search for correctable lesions.

From the Departments of Renal Medicine and Radiology, Cookeville General Hospital, Cookeville.

Reprint requests to 119 S. Jefferson Ave., Cookeville, TN 38501 (Dr. Hudgins).



Figure 1. (A) Stenosis left main renal artery predilatation (arrow). (B) Left main renal artery postdilatation.



Figure 2. Right lower pole renal artery postdilatation (arrow).

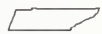
The most common "curable" form of hypertension is stenosis of the renal artery. The decrease in renal blood flow produced by renal artery narrowing increases renin release from the affected kidney, which accelerates generation of angiotensin II. Angiotensin II constricts the peripheral arteriolar smooth muscle, and stimulates

aldosterone release from the adrenal glands, which causes sodium and water reabsorption in the renal tubules. Thus, blood pressure rises from (1) increased intravascular volume, (2) increased cardiac output, and (3) peripheral arteriolar vasoconstriction. Blood pressure falls after the stenosis is corrected, since renin activity drops, interrupting the production of angiotensin II. A diuresis may follow correction of the stenotic artery, as occurred in this patient, depending on the degree of extracellular fluid volume expansion.

Renal artery stenosis is usually associated with atherosclerotic disease and less frequently with fibromuscular intimal hyperplasia. Bilateral renal artery disease is frequently present in both types. Atherosclerotic disease is usually present in men in the fifth and sixth decade and fibromuscular disease is more frequent in women in the third and fourth decade. Kindreds of fibromuscular dysplasia causing hypertension have been reported.³

A pathoanatomic link may exist between renal

artery dysplasia and the renal pathology of hereditary nephritis. Renal biopsies in normotensive Alport's patients show vascular intimal thickening in small intrarenal arterioles. Similarly, main renal arteries or their branches involved with intimal wall thickening could produce critical artery lumen narrowing and renovascular hypertension. Arterial and arteriolar intimal thickening relate to the more finite problem involving the arteriolar glomerular basement membrane defect in hereditary nephritis. The defect, identified by electron microscopy, is a splitting in the glomerular capillary basement membrane.⁴ Such diffuse faults in renal arteriolar basement membranes may facilitate dysplastic intimal wall thickening. Definitive correction for renal artery dysplasia can be accomplished by the traditional operative approach or PTA. PTA of renal arter-

ies has become an effective treatment modality for renovascular hypertension and is associated with less morbidity and a shorter hospital stay than the operative repair.⁵⁻⁷ Either procedure, when successful, relieves the hypertension and preserves or improves renal function. 

REFERENCES

1. Alport AC: Hereditary familial congenital hemorrhagic nephritis. *Br Med J* 1:504-506, 1927.
2. Gubler M, Levy M, Broyer M, et al: Alport's syndrome—A report of 58 cases and a review of the literature. *Am J Med* 70:493-505, 1981.
3. Major P, et al: Hereditary fibromuscular dysplasia with renovascular hypertension. *Ann Intern Med* 86:583, 1977.
4. Heptinstall RH: Miscellaneous conditions affecting the kidney, in *Pathology of the Kidney*, vol II. Boston. Little Brown and Co. 1974, pp 1138-1145.
5. Gruntzig A, Vetter W, Meier B, et al: Treatment of renovascular hypertension with percutaneous transluminal dilatation of renal artery stenosis. *Lancet* 1:801-802, 1978.
6. Grim CE, Weinberger MH, Yune H, et al: Percutaneous dilatation for renal artery stenosis. *J Cardiovasc Med* 62:824-829, 1981.
7. Gerlock A, Hollifield J, MacDonnell R Jr, et al: Percutaneous transluminal renal angioplasty (PTRA). *J Tenn Med Assoc* 74:360-362, 1981.

Help for Impaired Physicians

Through its Committee on Impaired Physicians, TMA helps doctors who are suffering from alcoholism, other drug addiction, psychiatric disorders or senility. The thrust of the program is rehabilitative, not punitive. The Committee is composed of physicians who have special expertise in these areas, some from personal experience. Effective treatment for these illnesses is achieved most easily when the disease is detected early and family, friends, and associates are urged to avoid misguided sympathy which enables the condition to deteriorate.

HELP US TO HELP

Call the TMA Impaired Physician Program (615) 327-2711; outside Nashville call collect. Phone service available around the clock.

Report of the Maternal Mortality Subcommittee of the TMA Maternal and Child Care Committee

Introduction

The Maternal Mortality Subcommittee of the Committee on Maternal and Child Care of the Tennessee Medical Association has met three times since its inception in 1980. It met once in the fiscal year 1980-81. At that meeting, four maternal deaths were reviewed and all occurred in 1980. The subcommittee met twice in the fiscal year 1981-82 and reviewed 14 cases. Seven of these maternal deaths occurred in 1980 and seven occurred in 1981. The number and rates of maternal deaths from 1970 to 1980 are found in Table 1. As noted, there were 13 deaths in 1980 for a rate of 0.19 per 100,000.

Of the 18 maternal deaths reviewed, the subcommittee determined that eight resulted from direct obstetrical causes, and nine from indirect; one was nonrelated. The subcommittee further determined the preventability and the factors of responsibility. The Maternal Mortality Subcommittee was formed for educational purposes only and not for punitive purposes.

Three cases are presented for educational purposes.

Case 1

A 31-year-old white unmarried woman, gravida 2, para 1, abortus 0, with an E.D.C. of Feb. 21, 1980, whose prenatal care was administered by the Public Health Department and whose first pregnancy was uncomplicated, had two admissions to the hospital with a diagnosis of "false labor." On the third admission her blood pressure was 140/90 mm Hg and she complained of discomfort in the right upper quadrant. Her cervix was dilated to 4 cm and was 50% effaced. Her hematocrit was 35%. At 9 cm her contractions diminished and were augmented with oxytocin. She was taken to the delivery room at complete dilation at 1:40 PM. In the delivery room a face presentation was noted and there was an increased amount of vaginal bleeding, because of which an internal podalic version was done under nitrous oxide and halothane anesthesia. The version and extraction began at 2:25 PM and a dead baby was completely delivered at 3:15 PM. The placenta was removed manually. There was an estimated 750-cc blood loss. Oxytocin and ergotrate were used postpartum. While on the delivery table the patient had a cardiorespiratory arrest at 3:17 PM and was pronounced dead at 4:00 PM. Death was presumed due to an embolism, either amniotic fluid or thrombotic. The committee decided that this was a direct maternal death.

TABLE 1
MATERNAL DEATHS IN TENNESSEE

Year	Number	Rate*
1970	18	2.5
1971	21	2.9
1972	16	2.4
1973	23	3.6
1974	24	3.7
1975	15	2.4
1976	7	1.1
1977	16	2.4
1978	10	1.5
1979	9	1.3
1980	13	1.9

*Rate per 10,000 live births.

Comment

It is well known that internal podalic version carries significant risk to both mother and baby and is a procedure that has been considered no longer as an acceptable method of delivery except in second twin deliveries. Face presentations, if they do not progress normally to a mentum anterior, are best handled by Cesarean section. This case most likely would have had a completely different outcome had medical personnel proceeded with an emergency Cesarean section rather than the internal podalic version that was performed.

Case 2

A 30-year-old gravida 3, para 2, whose E.D.C. was Aug. 1, 1981, was admitted in labor at 39 weeks' gestation. During the early stages of labor there was a small amount of vaginal bleeding, but the fetal heart rate was within normal limits. The rate dropped to 60 beats per minute as the mother's temperature rose to 102.5°F, and because of continued fetal bradycardia, the patient underwent an emergency Cesarean section resulting in a 10 lb 5 oz male infant with Apgars of 1 and 5. Because of a complete abruption with severe bleeding, a supracervical hysterectomy was performed, during which the fibrinogen dropped to less than 50 and platelets to 30,000; the partial thromboplastin time was over 150 min. She was treated with 14 units of blood and frozen plasma and cry-

oprecipitate but was pronounced dead at 1:33 PM that day. The amniotic fluid grew out group B streptococcus, and at autopsy amniotic fluid debris was noted in the pulmonary vasculature. The committee felt this to be a directly related maternal death.

Comment

Such tragic cases point out the possibilities of problems during birth. While this case ended tragically, other less severe forms of abruptio placentae that occur during labor are managed successfully in this country because of the patient's proximity to emergency care while in the hospital. Had this patient not sustained an amniotic fluid embolism, it is reasonable to assume that she might have survived. Amniotic fluid embolism is a disaster that usually results in death but on occasion can be treated successfully. In this case the combination of a complete abruptio resulting in a disseminated intravascular coagulopathy with the added insult of an amnionitis and subsequent amniotic fluid embolism was obviously more than this mother could handle.

Case 3

A 32-year-old gravida 4, para 3, with three living children, had a benign medical history and had no antepartum problems until the 38th week of gestation, when she noted shoulder-tip and chest pain, for which she was admitted to the hospital. Her packed cell volume was 40% and on a chest x-ray the right side of the chest was completely radiopaque. Because a PO_2 at her local hospital was 84, she was transported to the tertiary center where thoracentesis yielded essentially no fluid. Her hematocrit was 40%, but her pulse rate was 140 beats per minute and she was experiencing mild to moderate respiratory distress. Although the fetal monitor tracings revealed late decelerations with a few contractions, it was decided that any surgical procedure at that time would threaten the mother's life, and the patient therefore underwent a computerized tomography (CT) scan prior to chest surgery. During the scan, however, the patient underwent a cardiorespiratory arrest and all attempts at resuscitation failed. No fetal heart tones could be heard during the resuscitation, and the fetus was also pronounced dead.

Postmortem examination revealed that a branch of the common carotid artery supplying the pleura had ruptured at a bifurcation, presumably from an aneurysm, resulting in blood accumulating in the extrapleural space pushing the pleura toward the mediastinum. The committee labeled this death as an indirect obstetrical maternal death.

Comment

This highly unusual case illustrates the problem of ruptured aneurysms in pregnancy. Over 50% of ruptured arterial aneurysms in women under the age of 40 are pregnancy-related. The hemodynamic and endocrine changes of pregnancy appear to be the cause of arterial alterations which lead to new aneurysm formation and/or weakening of preexisting aneurysms. Arteries most commonly reported to have aneurysms rupture during pregnancy are the aorta, and cerebral, splenic, renal, coronary and ovarian arteries. In many instances the rupture of an arterial aneurysm will initially simulate other less serious disease processes, thus delaying the correct diagnosis until a catastrophe occurs. Early diagnosis and treatment of a ruptured arterial aneurysm are imperative for optimal chances of survival of the mother and fetus.

Subcommittee Members:

B. K. Hibbett, III, M.D.,
Chairman
Larry T. Arnold, M.D.
James C. Hudgins, M.D.
B. J. Smith, M.D.
A. J. Mueller, M.D.
William Stepp, Jr., M.D.
James S. Bell, M.D.
Robert L. Harrington, M.D.
T. E. Lester, M.D.
Irvin Ray King, M.D.
Frank H. Boehm, M.D.,
Consultant

TENNESSEE MEDICAL ASSOCIATION

148th ANNUAL MEETING

April 13-16, 1983

Opryland Hotel, Nashville, Tennessee

When your overweight patients seek your help with a weight reduction plan...



Another New Tax Law Affects Physicians Significantly

GEOFFREY T. ANDERS, J.D., C.P.A.; LEIF C. BECK, LL.B., CPBC;
J. THOMAS MARTIN, J.D.; and MICHAEL J. GANNON, J.D.

The recently passed Tax Equity and Fiscal Responsibility Act of 1982 promises major changes in the ways physicians plan for retirement and possibly in the way they structure their practices. While it is still early some initial thoughts and reactions to the Bill's provisions are in order. As time passes and advisors have had more of a chance to dissect the law's provisions, additional ideas and planning considerations will undoubtedly come to light. Nonetheless, some doctors will be tremendously affected, so early consideration of the law's changes is in order.

Corporate Retirement Plan Changes

Contributions to money purchase pension plans and profit sharing plans (so-called defined contribution plans) will be limited to 25% of salary and not more than \$30,000 beginning for plan years beginning after Dec. 31, 1982. Defined benefit plan limitations have been reduced to the lesser of 100% of compensation or \$90,000. While both these new limitations will apply beginning in 1983, any new plans established after July 1, 1982 must use the new rules—so it is too late to quickly adopt plans in the hope of getting a year or two of heavy contributions in under the wire.

While those rules in themselves will limit incorporated doctors' retirement plan contributions, the situation is even worse since most practices will fall within a new classification of "top heavy plans." These additional restrictions are discussed below.

In addition to reducing the amounts which might be contributed to retirement plans, other negative changes have been made. For example, previously the dollar limit on contributions was

increased annually by a cost of living factor. Under the new law the dollar limitations are frozen until 1986. Furthermore, most defined contribution plans are "integrated" with Social Security to provide a 7% extra contribution on salaries which exceed a specified amount. Beginning in 1983 the 7% integration differential is reduced to the actual Social Security tax paid by the professional corporation for Old Age, Survivors and Disability Insurance (which is only a part of the present 6.85% employer's Social Security tax). Thus the cost of staff participation will increase accordingly.

For doctors with defined contribution plans, the best present strategy should be to maximize plan contributions this fiscal year (and next fiscal year if the year end is set in October, November or December). It may be well to use current year cash to fund a higher level of salaries, accruing the plan contribution for payment in the next year or perhaps borrowing to make the plan contributions. Unfortunately this maximum funding approach will not work for defined benefit plans.

Perhaps defined benefit plans and the so-called 1.4 rule situations (a defined benefit plan in combination with a defined contribution plan) are hardest hit. Defined benefit plans with a lower than age 62 normal retirement date must take into account actuarial reductions in the benefit formula. Plans with an age 55 normal retirement date may only be able to fund for a \$75,000 annual benefit (rather than the new \$90,000 annual benefit). The "1.4 rule" plan arrangements (a combined defined benefit plan and money purchase pension plan) will be reduced to 1.25 of the respective plan dollar limitations; and because of the "top heavy plan" rules, unless additional benefits are funded for non-doctor employees that 1.25 might be further reduced to 1.0.

Copyright by authors, September, 1982

The authors are the principal attorneys affiliated with The Health Care Group, Inc., Bala Cynwyd, Pa.

Thus physicians presently contributing to both a defined benefit plan providing for a 100% of salary retirement benefit and a 10% money purchase pension plan may find themselves limited to only the defined benefit plan under the new decreased dollar limitations.

Doctors who have defined benefit retirement plans with benefits already funded to exceed the new law's limitations will be frozen out from making additional retirement plan contributions until 1986 or perhaps even later. At that point cost of living increases in the dollar limitations may permit additional contributions. There does not appear to be a good way around this situation. Even terminating a defined benefit retirement plan (where the benefits exceed the new limits) and adopting the more traditional defined contribution plans still may not permit contributions in excess of perhaps 10% of salary or \$7,500, whichever is less.

Also hard hit will be some doctors who purchase life insurance through their retirement plans. With the reduced funding limitations, current insurance amounts may exceed the maximum amounts permissible, forcing cancellation of some of the insurance. Since it takes years and years of premium payment to recoup the front end costs of insurance, many doctors will simply find they have paid premiums for nothing.

Certainly each situation will need individual consideration to decide on the best way to proceed in the future. Still, it appears that some physicians will be unable to contribute to retirement plans over the next several years.

The one "beneficial provision" in the new rules is that existing corporate retirement plans need not be amended to comply with the new rules until late in 1983. Presumably this is to permit professionals to consider "unincorporating" before incurring the expenses of substantially rewriting their present retirement plans. This possibility is discussed further below.

Keogh Plans

While the changes to incorporated doctors' retirement plans are uniformly more restrictive, the contrary is true for unincorporated doctors' Keogh Plans. The Keogh Plan rules have been liberalized making those plans comparable with corporate plans. Beginning in 1984 Keogh Plans will fall under the same restrictions for contributions as do incorporated doctors' retirement plans. Thus with an appropriate plan or plans an unincorporated doctor will be able to contribute

up to 25% of his earned income (after subtracting the resulting contribution to the retirement plan). Thus a doctor with net earnings of \$100,000 would be able to contribute \$20,000 per year to a Keogh Plan or plans (\$100,000 earned income less \$20,000 of Keogh contribution equals \$80,000 times 25% or \$20,000).

Other rules have also been substantially liberalized to parallel corporate plan restrictions. Doctors will now be able to self-trustee their own Keogh Plans, make quite substantial non-deductible voluntary contributions, and integrate their retirement plans with Social Security. Additionally, the flexibility available in a corporate profit sharing plan (i.e., the ability to contribute anywhere between 0% and 15% of salary each year) has been extended to Keogh type profit sharing plans. Other rules have further liberalized the restrictions placed on Keogh Plans and it even appears that unincorporated doctors may borrow from their Keogh Plans although only within the new plan loan restrictions contained in the Act.

Certainly doctors considering incorporation in the near future should rethink their plans. Corporate practice will be beneficial in only very few instances, such as where a high level of medical expenses are incurred regularly. Otherwise the remaining corporate fringe benefits are offset by the higher costs of the ongoing corporation. Very critical consideration is now called for before incorporating a practice.

"Top Heavy" Plans

While the overall changes to corporate retirement plan contributions are bad enough for doctors desiring a heavy level of retirement plan funding, those doctors may also find that continuing their retirement plans will be more costly in terms of employees' benefits. Almost all physicians will find themselves within the new "top heavy plan" classification which begins in 1984. That situation exists where for any plan year the sum of "key" employees' accrued benefits or accounts exceeds 60% of the total of all employees' benefits or accounts. A "key" employee is any officer of a corporation or any greater than 5% stockholder or any greater than 1% stockholder who has earnings over \$150,000.

For these "top heavy" plan situations very quick vesting schedules must be provided for the non-key employees. Top heavy plans will be required to vest employee benefits at the rate of 20% per year beginning with an employee's second year of service. Under this format employ-

ees will entirely vest in their retirement benefits after only six years. Alternatively, doctors may elect to exclude employees from participation for three years (similar to the old Keogh rules) but then all contributions or benefits will be 100% vested.

Also required minimum contributions or benefit levels must be funded. In the case of defined contribution (money purchase pension and/or profit sharing) plans, employees must be provided with contributions of at least 3% of salary per year. The rules permitting integration with Social Security do not affect this minimum contribution rule. Similar provisions in defined benefit plans provide that an employee's accrued benefit must equal 2% of salary times the number of years of service up to a maximum of 20%. In determining whether these minimum requirements are met, all plans of the corporation are considered together. In the case of a combined defined benefit and defined contribution plan only one of the plans need meet the new requirements, but the more complicated minimum benefit levels are somewhat higher.

For most physicians these minimum contribution rules will have little effect. However, where a doctor or group maintains only an integrated profit sharing plan and where only minimum contributions are made, the ability to make future contributions at all will be restricted by the necessity of providing for staff benefits as well.

Unincorporated doctors should note that with the liberalization of the Keogh Plan rules, they also become subject to the "top heavy" plan restrictions.

Retirement Plan Loans

Effective Aug. 13, retirement plan loans have been significantly limited. While any outstanding loans are unaffected, any new loans made after Aug. 13 cannot cause the total outstanding amounts to exceed \$50,000 or one-half of the participant's vested interest, whichever is less. However, if a participant's vested interest is less than \$10,000, loans may be advanced up to that amount (assuming adequate collateral is pledged). Any refinancing, extension or renegotiation of a currently outstanding loan is treated as though it were a new loan for these rules.

Additionally, any new loan must be repaid within five years or the balance due after five years is considered a taxable distribution. One exception to the five year repayment rule is allowed in the case of loan amounts used to pur-

chase, build or substantially rehabilitate a doctor's primary home.

These rules apparently apply to Keogh Plans as well as to corporate retirement plans, although Keogh Plans will need to be amended to permit borrowing under the terms of the plan.

Retirement Plan Distributions

Several key changes have been made in the laws governing distribution from retirement plans. First for "key" employees distributions of retirement plan funds must begin no later than age 70½, regardless of whether the doctor actually retires or not.

Of worse consequence is the change in the estate tax exclusion which was previously permitted retirement plan dollars. Under current law distributions from a plan made in installment payments over two or more years are excluded from a doctor's estate. However, beginning in 1983, the exclusion from estate tax will be limited to \$100,000.

This change should again necessitate doctors reviewing their present estate plan. In many cases the \$100,000 cap on the estate tax exclusion will result in substantially increased estates. At least a review of already established estate plans is called for to determine the effect of this change. In some cases a complete revision in the estate plan may be necessary.

Corporate Fringe Benefits

Changes were also made in the rules permitting \$50,000 of group term life insurance as a corporate fringe benefit. In 1984 the new rules require group term life insurance plans to cover at least 70% of employees (with certain exclusions for part-time employees and staff with less than three years of service) and for "non-discriminatory" plan benefits.

Since providing life insurance coverage as a uniform percentage of salary is acceptable as nondiscriminatory, doctors may need to revise their plan setup but should not be prevented from continuing this fringe benefit program.

While generally minimizing the differences between incorporated and unincorporated doctors, changes in the individual income tax law actually make corporations more valuable in certain situations. Beginning in 1983 personal income tax deductions for medical expenses will be limited to medical expenses in excess of 5% of adjusted gross income (replacing the previous 3% rule). With that change doctors with a heavy level of

personal or family medical expenses will find the benefit from corporate medical expense reimbursement plans or cafeteria health plans to be substantially increased.

“Unincorporating”

By eliminating the more favorable corporate retirement plan rules as compared with Keogh Plans, it is clear that few unincorporated physicians should now move to incorporate. In passing the law Congress recognized that many presently incorporated professionals may wish to “unincorporate.” Without the greater retirement plan benefits, incorporation is typically a broken proposition at best. The additional expenses incurred by practicing through a corporation such as the variety of payroll taxes on the doctor’s salary, the ongoing additional legal and accounting expenses and the possibility of double taxation on IRS asserted dividends will often equal or exceed the dollar benefits from the few remaining corporate fringe benefits.

In recognizing that professionals may wish to unincorporate, Congress inserted special rules to apply only in 1983 and 1984 for liquidating professional corporations. Those rules limit the negative tax impact which would normally accompany dissolution of a corporation. For example, accounts receivable would not be automatically recognized as income nor would a practice’s goodwill be taxed to the unincorporated doctors who continue the practice.

While the major negative tax impact has been eliminated by these special provisions, that is not to say that no tax would result from the liquidation. Shareholder doctors would still receive dividend income to the extent that their corporations had “earnings and profits,” a term comparable to retained earnings. Thus if “unincorporating” the practice seems to be a favorable move, steps may need to be taken to reduce earnings and profits well before the liquidation can occur.

Ophthalmologists, freestanding radiology practices and other specialties where a large investment in equipment or investments have been made through the corporation will require particularly careful planning. In those situations and in other cases of high retained earnings balances, it may be possible to accrue retirement plan contributions for payment after the end of the fiscal year. Currently available cash is instead used to pay salary, bonuses and other obligations. The net effect of such a plan is to use previous years’

corporate earnings for contribution to retirement plans thus reducing the built up “earnings and profits,” making the liquidation less costly.

Miscellaneous Changes

A variety of other changes are made in the new tax law. Several of these will impact professional practices and the way they operate. The major provisions are detailed below.

Some professional corporations in an effort to circumvent covering staff employees in their retirement plans have arranged for “employee leasing” or “contract staffing.” Essentially an unrelated business hires the practice’s staff and leases back those people to the corporation. Congress has now properly moved to close this “loophole” by providing that any leased employee who works on a substantially full-time basis for a practice in excess of 12 months is considered an employee of that practice for retirement plan purposes.

This need not be the result if the leasing company itself provides a nonintegrated money purchase pension plan with a minimum 7.5% contribution rate that also provides for immediate participation and vesting. So while the employee leasing approach is not totally foreclosed, we suspect that the economics of contract staffing will be such that little or no cost savings actually will result to doctors’ practices.

The viability of some partnership of professional corporations has also been called into question because of a provision specifically aimed at overruling the court decision in *Keller v. Commissioner*. In that case a doctor’s incorporation of his partnership interest was upheld even though the sole purpose for incorporation was to obtain the tax benefits of corporate retirement plans and medical expense reimbursement plans. In the new law’s design, the IRS will have discretion in similar situations to allocate income, deductions, etc. between the doctor and his professional corporation so that no tax benefit is available only because of the corporation’s existence.

This provision promises to eliminate partnership of professional corporation arrangements. Typically, partnerships of professional corporations were entered into to provide greater flexibility in retirement plan contributions and fringe benefits than would have been available under a single corporate or partnership setup. While it is not presently clear how broad the sweep of the new provision will be, doctors considering restructuring their practice to a partnership of professional corporations would be best advised

to delay such action for the time being.

Investment tax credit rules were also changed somewhat so that for equipment placed in service after 1982, a 10% investment tax credit will only be available if the basis for depreciation deductions is reduced by one-half the investment tax credit. In the alternative the doctor or practice may simply elect to take an 8% tax credit without any reduction in a depreciation base. A present value analysis of the two alternatives shows that they are essentially equivalent. The 10% tax credit (with the reduction in the depreciation allowable) is slightly better since the cash flow under that election is faster than under 8% credit.

Two planning matters arise because of this change. First, doctors considering the purchase of substantial amounts of equipment will be well advised to have the equipment installed before the end of the year. Speeding up the decision to buy saves tax deductions equal to one-half of the tax credit.


Doctor groups whose buy-sell agreements calculate equipment values based upon depreciated cost should change those agreements to reflect that depreciated values should be calculated without regard to the one-half of investment tax credit markdown. Without such revisions, doctors leaving a group could be shortchanged (if the original cost is understated by the nondepreciable amount) or paid too much (if the full original cost was used but the lesser depreciation deductions permissible for tax purposes are taken into account).

Perhaps the most recent insurance company product with which many doctors have been

bombarded is "flexible premium" or "universal" life insurance. The new tax act provides a variety of requirements with which the policies must comply in order for the proceeds from the policy to be excluded from income taxation under the usual life insurance rules. Decisions to purchase universal life insurance should be forestalled until and unless the insurance company can guarantee that it meets the new requirements. For those doctors who may have purchased such a policy already, agents should be contacted promptly to ascertain whether or not the policy in question meets these rules.

Conclusion

As can be readily appreciated, doctors' situations, particularly vis-a-vis retirement planning, have been substantially altered. Some incorporated doctors will find themselves unable to fund retirement plans over the next several years, while unincorporated doctors may benefit from the increased contribution limits and plan flexibility to become available in 1984. Virtually all incorporated doctors should carefully review their situation with competent advisors to determine whether the corporation should be liquidated in 1983 or 1984. Doctors whose retirement plan accounts now total over \$100,000 should also be sure to consult their estate planning attorney to determine if a change in their present death plan is called for.

While it will be some time before the dust settles, physicians should be generally aware of the new tax law provisions and begin planning to reorient their practices and finances with a view to the now changed tax law environment. 

MAG MUTUAL MEMOS

by Bruce C. Newsom, M.D.

The following are TEN COMMANDMENTS in case you are sued:

1. THOU SHALT NOT talk or write to plaintiff's attorney
2. THOU SHALT NOT discuss case in hospital corridors or lounges
3. THOU SHALT NOT talk to the plaintiff
4. THOU SHALT NOT talk to reporters
5. THOU SHALT NOT alter records
6. THOU SHALT NOT covet thy neighbor's settlement
7. THOU SHALT NOT ask legal advice on the golf course
8. THOU SHALT NOT quarrel with plaintiff's attorney (on the stand)
9. THOU SHALT NOT worry about counter-suing
10. THOU SHALT NOT mistake thyself for a trial lawyer

Reprinted from the *Bulletin of the Muscogee County Medical Society*, Columbus, Georgia

Alcoholic Hepatitis

CHARLES E. KOSSMANN, M.D., Editor

DAVID PESOLA, M.D.
(Resident Physician)

A 26-year-old man was admitted to the City of Memphis Hospital on Oct. 12, 1981 with a five-day history of increasing jaundice and fever with intermittent sweats. He denied abdominal pain, increased abdominal girth, or other gastrointestinal symptoms, but had observed darkening of his urine over the previous two or three days. He denied a past history of blood transfusions, exposure to viral hepatitis, or intravenous drug usage. For six months he had drunk one liter per day of alcoholic beverages, and had been a heavy user of alcohol for the past eight years. His only other complaint was a rash on all distal extremities over the preceding two days, which he ascribed to flea bites. All members of his household had a similar rash of recent onset.

The past medical history was noncontributory. Medications included diazepam, up to 15 mg/day, for his "nerves," and four recent doses of tetracycline prescribed by a local physician for a respiratory infection.

Generally he was an anxious but not tremulous, well-developed, well-nourished white man, alert and oriented, who was sweating profusely and obviously jaundiced. His blood pressure was 140/96 mm Hg; his pulse rate of 108 beats per minute rose to 132 upon standing. His oral temperature was 105°F and respirations 18/min. There were no cutaneous spider angiomas or palmar erythema. There was conjunctival and cutaneous icterus; dentition was poor. Examination of the neck, thorax, heart and lungs was unremarkable. Abdominal examination disclosed mild obesity without surgical scars. The liver was markedly enlarged and tender to palpation; there was no splenomegaly, fluid wave, or shifting dullness. Rectal guaiac was negative. There was no asterixis or tremor. He had an erythematous rash, consisting of macules of 1 cm diameter with irregular borders, confined to the distal extent of all four extremities. Small puncture marks in the center of each discrete macule confirmed the impression of insect bites.

The white blood cell count was 19,200/cu mm with a differential shifted to the left. The hematocrit was 41.5%. The prothrombin and thrombin times were normal. Bilirubin was 16.9 mg/dl with the direct 12.0 mg/dl. The serum aspartate aminotransferase (SGOT) of 120 U/liter was three times normal; the alanine aminotransferase (SGPT) of 12 U/liter was normal. The alkaline phosphatase of 379 IU/liter was five times normal, and the gamma glutamyl transpeptidase (GGTP) of 840 U/liter about 20 times normal. The serum cholesterol was 447 mg/dl with cholesteryl esters reduced to 12% (normal 70%). Serological markers for viral hepatitis were negative. Five days after admission abdominal ultrasonography re-

vealed a large liver of homogeneous texture with normal-sized bile ducts. Chest roentgenogram and electrocardiogram were normal.

The hospital course was characterized by a worsening of all clinical and laboratory features. Accordingly he was transferred to the Clinical Research Center of the University of Tennessee Hospital on Oct. 19, 1981 for further study and management. There he had daily fever, with temperature rising to a maximum of 102.5°F and accompanied by sweating. He developed ascites which was tapped; all cultures were negative. The prothrombin time increased to 18.8 seconds compared to a control of 13.8 seconds. Small bilateral pleural effusions developed. The BUN rose to 63 mg/dl and the creatinine to 6 mg/dl.

Treatment was conservative with salt restriction, diuretics, a balanced high vitamin diet, intravenous fluids and albumin, and chlordiazepoxide for minor withdrawal symptoms. Prednisone, 40 mg intravenously every 12 hours was given for a time, then gradually decreased. On Nov. 4, 1981 consolidation of the right middle lobe occurred and the peripheral blood showed a leukemoid response. Blood cultures grew out a micrococcus sensitive to cephoxitin, for which he was successfully treated with intravenous cephoxitin and later oral cephadrine. The insect bites resolved spontaneously.

The patient gradually improved and he was discharged on Nov. 25, 1981 on oral prednisolone, 25 mg daily; oral aldosterone, 50 mg four times a day; and multivitamins with folate. At discharge the serum bilirubin was 4.6 mg/dl, cholesterol 267 mg/dl with 40% esters, and alkaline phosphatase 466 IU/liter. Some ascites and pendant edema remained and the liver was markedly enlarged. He was referred to Alcoholics Anonymous and to the gastrointestinal clinic for follow-up.

The final diagnosis was acute alcoholic hepatitis.

SEYMOUR M. SABESIN, M.D.
(Professor of Medicine, Gastroenterology)

This is a classical case of alcoholic hepatitis. It is appropriate at the outset to ask, what is alcoholic hepatitis? Is it a distinct clinical entity that has specific histopathological and laboratory features or is it a nonspecific syndrome resulting from a combination of insults to the liver associated with the abuse of alcohol? There is a classical microscopic appearance of the liver on biopsy in almost all individuals in whom this diagnosis is made.^{1,2} Typically the liver biopsy reveals vacuolated hepatocytes filled with triglyceride droplets. Scattered among the lipid-laden cells are variable numbers of inflammatory cells.

From the Department of Medicine, University of Tennessee, 951 Court Ave., Memphis, TN 38163.
Presented Oct. 28, 1981.

On higher power magnification a significant amount of hepatocellular necrosis can be seen; however, it tends to be focal and associated with an inflammatory exudate composed of polymorphonuclear leukocytes, lymphocytes and various types of mononuclear cells.^{1,2}

There is no question that alcoholic hepatitis is related to the ingestion, as in this patient, of large amounts of alcohol, usually over periods of months or years.³ An acute event associated with the typical clinical and laboratory features as described for this patient is usually the result of a great increase in alcohol ingestion.

The Clinical Picture

The characteristic symptoms and signs of patients with alcoholic hepatitis are listed in Table 1. Certainly anorexia, nausea, vomiting, weakness, and loss of weight are characteristic. Most of the patients are jaundiced, but the severity of jaundice is quite variable. Thus some patients will be mildly icteric whereas others will have serum bilirubins in the range of 15 to 20 mg/dl and a few patients will be very severely jaundiced with bilirubin levels approaching 30 mg/dl. Although the more intensely jaundiced patients will usually complain of abdominal pain, it is of interest that today's patient, with a serum bilirubin of 16.5 mg/dl, did not. The abdominal pain is usually a manifestation of massive hepatomegaly and is part of the constellation that includes fever and leukocytosis. This foursome of symptoms—jaundice, pain, fever, leukocytosis—suggests to many clinicians the possibility of extrahepatic biliary obstruction, and up to the advent of ultrasonography it was difficult to rule out that possibility.⁴

Clinicians who were not cognizant of the specific diagnosis of alcoholic hepatitis or who did not realize that fever and leukocytosis are common in patients with alcoholic hepatitis proceeded with an exploratory laparotomy. As might be expected, this was and continues to be a rather serious undertaking in patients with severe liver disease. Therefore, it is important to recognize that sustained fever, leukocytosis, hepatomegaly and abdominal pain are compatible with the diagnosis of alcoholic hepatitis, and do not necessarily mean infection or extrahepatic biliary obstruction.⁵ Nevertheless, the diagnosis can be tricky, as exemplified by a patient we were consulted about who had alcoholic hepatitis, confirmed by liver biopsy, and at the same time extrahepatic biliary obstruction due to an impacted gallstone. The diagnosis of extrahepatic obstruction

TABLE I
SYMPTOMS AND PHYSICAL FINDINGS IN ALCOHOLIC HEPATITIS

Weakness	80%
Anorexia	90%
Nausea and Vomiting	80%
Weight Loss	65%
Abdominal Pain	50%
Fever	40%
Hepatomegaly	90%
Jaundice	70%
Ascites	50%
Spider Angiomas	65%
Splenomegaly	40%

tion was made by percutaneous transhepatic cholangiography prompted by the patient's severe jaundice and spiking fever.

The physical signs of alcoholic hepatitis are fairly obvious (Table 1). Almost all of the patients have hepatomegaly, and may or may not have ascites; if present, it must be properly evaluated in a patient with no previous diagnosis of chronic liver disease. We do not feel too uncomfortable in assuming that a patient with acute alcoholic hepatitis does not have cirrhosis even if ascites is present since with massive fatty infiltration of the liver portal hypertension, ascites and splenomegaly can develop acutely. We have seen many patients in whom ascites was a rather transient phenomenon. Such patients enter the hospital with hepatomegaly, develop fluid retention as their condition worsens, then with resolution of the disease the ascites and other signs of portal hypertension disappear. Cutaneous angiomas may be a manifestation of acute hepatocellular dysfunction and not necessarily reflect underlying chronic liver disease.

Laboratory Data

In regard to laboratory tests, I have already mentioned the common occurrence of leukocytosis. Some patients have a leukemoid reaction and, as we shall see later, this may be important in understanding the pathogenesis of the hepatocellular injury. The SGOT is above normal in almost all patients, but the elevation is rather modest, an important distinction from either drug-induced or viral hepatitis. Classically, in acute viral hepatitis the SGOT and SGPT are markedly elevated, but in alcoholic hepatitis, even though we use the term hepatitis, SGOT elevations are rather modest, and surprisingly, the

SGPT is normal. Alkaline phosphatases tend to be elevated in the range of 300 to 400 IU/liter. Note that in this particular patient there was a discrepancy between the alkaline phosphatase levels of about 300 IU/liter and the GGTP which was about 800 U/liter. Usually we tend to think of GGTP and alkaline phosphatases as running closely together; however, chronic alcohol ingestion stimulates the hepatocyte microsomal enzymes causing an elevation of GGTP even in the presence of a normal alkaline phosphatase. In the present case in which there was severe intrahepatic cholestasis, the GGTP was elevated due to cholestasis and alcohol.

It is important to point out the striking discrepancy between the elevated SGOT and the normal SGPT. This finding is characteristic of alcoholic hepatitis and can be used very effectively to distinguish alcoholic hepatitis from viral or drug-induced hepatitis in which both transaminase enzymes are elevated. This point is well worth remembering since an elevated SGOT in the presence of a normal SGPT should lead the clinician directly to the diagnosis of alcoholic hepatitis.

Prolongation of the prothrombin time and abnormalities of other coagulation factors are dependent upon the severity of hepatocellular necrosis. Hypoalbuminemia and hyperglobulinemia, if present, usually reflect underlying chronic liver disease.

Pathologic Features

What are the characteristic histopathological features of alcoholic hepatitis? Are they pathognomonic? Earlier I discussed briefly the main histological changes in alcoholic hepatitis. To repeat, almost all patients have a fatty liver, which undoubtedly reflects metabolic effects of alcohol on peripheral adipose tissue as well as toxic effects on the liver. Although not pathognomonic, fat is almost invariably present in the hepatocytes and tends to occur in great excess compared to the evidence of hepatocellular necrosis and inflammation. In some cases there is so much fat that no normal-appearing hepatocytes can be visualized. Among the hepatocytes ballooned with fat there are scattered foci of necrosis and inflammation. The latter are the more important histopathological features because even with the discontinuation of alcohol ingestion, some patients with alcoholic hepatitis will go on, practically under our eyes, to develop chronic inflammation and necrosis leading eventually to

cirrhosis. The cause of these repetitive cycles of inflammation, necrosis, fibrosis and regeneration is a particularly interesting phenomenon. It may be the result of infiltration of the liver by lymphocytes with release of fibrogenic lymphokines, and to other still poorly understood immunological phenomena.⁶⁻⁸

Another important feature thought to be pathognomonic, but not entirely so, is the presence of so-called alcoholic hyaline in the hepatocytes.^{2,9} Almost always the presence of the distinctive hyaline inclusions should be considered a histopathological hallmark of alcoholic hepatitis, although hyaline, microscopically indistinguishable from alcoholic hyaline, is seen in some other hepatic disorders and in fact has been observed in other conditions in which fatty liver occurs, such as diabetes mellitus. It is important to keep this in mind, since it has been recognized recently that diabetics may have a liver lesion that in many respects is similar to alcoholic hepatitis.

The hyaline may be important in the pathogenesis of alcoholic hepatitis. Immunologists have described alcoholic hyaline antigen and antibody in the plasma of patients with alcoholic hepatitis.⁶ When this observation is considered in context with the great variety of immunological abnormalities in these patients—including modifications of immediate and delayed hypersensitivity, accumulation of immune complexes in the blood, and alterations in populations of B cells and T cells in the liver itself—it is possible that the perpetuation of the hepatic lesion may be due to an immune response directed against the presence of hyaline in the hepatocytes.

Pathogenesis of Lipid Abnormalities

With regard to the pathogenesis of the hepatocellular injury, there is no question that alcohol or its metabolic products, such as acetaldehyde, are direct hepatocellular toxins.^{3,10,11} Alcohol produces toxic effects on hepatic mitochondria that result in altered fatty acid metabolism, causing fat accumulation in the hepatocytes. However, there is less information available regarding the relation of alcohol to the perpetuation of hepatic injury. I mentioned earlier that we have studied patients who develop fibrogenesis and distortion of the hepatocellular architecture and cirrhosis even when they abstain completely from alcohol. Alcohol undoubtedly initiates the lesion but there are unanswered questions about its capacity to perpetuate the lesion. Perhaps the immunologic abnormalities dis-

cussed above are of prime importance, but much is still to be learned about the relationship of the direct hepatic toxicity of alcohol and the initiation of immunologic abnormalities that may perpetuate and extend the injury.

Another question concerns the relationship of fat to the development of cirrhosis. Years ago, when the nutritional pathogenesis of cirrhosis was foremost, it was thought that fatty liver was a direct precursor of the cirrhotic lesion.¹² I would summarize my bias in this regard by stating that there is no evidence from animal models that fat in the liver, even if present in great excess and chronically, leads to cirrhosis unless there is an accompanying derangement in metabolism causing hepatocellular necrosis.

The availability of free fatty acids for hepatic metabolism depends upon the nutritional and metabolic state of the individual.¹³ Fatty acids may be derived from dietary sources after the degradation of triglyceride-rich chylomicrons by lipoprotein lipase. Moreover the metabolic products of so-called chylomicron remnants are taken up by the liver and the residual triglyceride hydrolyzed yielding fatty acids that are utilized for a variety of intracellular metabolic processes. Fatty acids are also derived from the catabolism of the triglyceride-rich, very low density lipoproteins (VLDL). These lipoproteins are secreted directly by the liver and undergo lipolysis by lipoprotein lipase with release of fatty acids. The fatty acids are used for energy by peripheral tissues such as muscle; those not metabolized are stored as triglycerides in adipose tissue. Under circumstances in which there is a stimulus for avid mobilization of fatty acids from adipose tissues, such as starvation, ketoacidosis, or alcohol ingestion, the great excess of fatty acids is taken up quantitatively by the liver where they enter various metabolic pathways. Fatty acids can be oxidized in the mitochondria or utilized for the synthesis of phospholipids or cholesterol esters, but the excess fatty acids that are not metabolized are quantitatively synthesized into triglycerides and assembled into lipoproteins, which are secreted from the liver. It is the derangements in these processes of fatty acid metabolism that lead to the development of the alcoholic fatty liver.

One concept in this regard is that excess fatty acids mobilized from adipose tissue by ethanol are not handled normally because of alcohol-induced derangements in mitochondrial function, leading to a decrease in fatty acid oxidation.³ Further compounding this overload is the active

metabolization of alcohol in the liver to acetate, which is used as a precursor for fatty acid synthesis. The net result of these derangements in the alcoholic is a massive accumulation of free fatty acids, which are almost quantitatively converted into triglycerides. Triglycerides are secreted by the liver as VLDL particles. Lipoprotein formation requires the hepatocyte to synthesize a sufficient amount of apoproteins to be assembled with the triglycerides to form the lipoprotein particle.

In acute alcoholic disease there may be problems with apoprotein synthesis.¹³ First, because of hepatocyte injury, there may be an impairment in apoprotein synthesis. Second, there may be nutritional deficiencies, limiting the liver's ability to synthesize apoproteins. Third, there is undoubtedly an imbalance between the massive amount of triglyceride in the liver and the ability of the hepatocytes to form lipoproteins rapidly enough to prevent an accumulation of triglycerides. Furthermore, alcoholic injury could impair the actual secretory process by interfering with microtubule formation. Microtubules are intracellular organelles required for the movement of secretory vesicles containing VLDL to the hepatocyte plasma membrane, where they are secreted into the perisinusoidal space of Disse.

Suffice it to say that all of these mechanisms leading to fatty liver are somewhat speculative at the present time. However, several of these derangements undoubtedly conspire to cause an imbalance between triglyceride synthesis and secretion, leading to the development of fatty liver.

What is the pathogenesis of the hyperlipidemia produced by alcohol? We know that alcohol has distinct effects on lipoprotein metabolism, leading to many metabolic abnormalities that can cause hyperlipidemia.¹³ Some patients are particularly susceptible; their livers simply secrete into the circulation massive amounts of triglyceride, which cannot be handled rapidly enough by the mechanisms concerned with VLDL catabolism to prevent hypertriglyceridemia. In addition, alcohol interferes with chylomicron catabolism. It has been shown that hepatic disease of various types is associated with lipoprotein lipase deficiency, therefore providing at least a partial explanation for the hyperlipidemia of the diseased liver.¹⁴

Variations in Clinical Course

The clinical course of patients with alcoholic hepatitis can be quite variable.^{13,15-17} We have seen

patients who at first seem relatively stable and then die within a few days of fulminant alcoholic hepatitis. They develop massive hyperbilirubinemia, prolonged prothrombin times, hepatic encephalopathy, and frequently but not invariably, evidence of underlying liver disease. Other patients have a rather prolonged course. For example, a patient studied in our department had fever of more than 101°F for over a month, developed ascites, which eventually cleared, and after about three months in the hospital had a remarkable resolution of the disease, including complete histologic improvement without any treatment except nutritional support.¹⁵

Those of us who have seen many patients with alcoholic hepatitis have become quite confident of the diagnosis on clinical and noninvasive laboratory grounds alone. Nevertheless it is appropriate to rule out, as was done in this case, other possibilities, such as hepatocellular toxicity from drugs, viral hepatitis, etc. In most patients it is not necessary to biopsy the liver in order to confirm the diagnosis, although in certain circumstances liver biopsy is still required and, in general, it is good practice to obtain at least one biopsy in patients with liver disease.

One of the best hallmarks of alcoholic hepatitis and of recovery is the percent of cholesteryl esters in the plasma.^{13,15-17} Inability of the liver to esterify cholesterol is a very sensitive index of hepatocellular dysfunction. One patient we studied in the Clinical Research Center had only 15% cholesteryl esters on admission, but over the next several months of hospitalization the percent of esters returned to normal as other indices of hepatic function improved.

From a clinical point of view, how should the possibility of obstructive jaundice be excluded in patients with clinical and laboratory features that suggest biliary obstruction? I think by far the best approach is ultrasonography. Liver biopsy is in general not very helpful in making a diagnosis of extrahepatic obstruction. The changes are rather nonspecific unless the obstruction has been present for a long time, and with all the fat and necrosis in the liver it is extremely difficult to make a clear-cut differential diagnosis. Thus, if there is no evidence on ultrasonography of dilatation of

the bile ducts, I think one can be rather secure in the conclusion that extrahepatic biliary obstruction is not present.

The causes of death in patients with alcoholic hepatitis are usually related to progressive hepatic failure, with hepatic encephalopathy, hepatorenal problems, bleeding, infection, and a variety of other complications.

Treatment

There is no specific treatment for alcoholic hepatitis other than abstention from alcohol, nutritional support, and specific therapies for such complications as encephalopathy or infection. There is a rationale for corticosteroid therapy in a small group of patients, but this is a complicated and controversial subject and those interested in a more comprehensive discussion than can be provided here should consult the appropriate references.^{1,18,19}

REFERENCES

1. Sabesin SM, Hawkins HL, Bertram PD, et al: Alcoholic hepatitis. *Gastroenterology* 74:276-286, 1978.
2. Harinasuta U, Chomet B, Ishak K, et al: Steatonecrosis-Mallory body type. *Medicine* 46:141-162, 1967.
3. Lieber CS: Pathogenesis and early diagnosis of alcoholic liver injury. *N Engl J Med* 298:888-893, 1978.
4. Ballard H, Bernstein M, Farrar JT: Fatty liver presenting as obstructive jaundice. *Am J Med* 30:196-201, 1961.
5. Hardison WG, Lee FI: Prognosis in acute liver disease of the alcoholic patient. *N Engl J Med* 275:61-66, 1966.
6. Leevy CM, Chen T, Zetterman RK: Alcoholic hepatitis, cirrhosis and immunologic reactivity. *Ann NY Acad Sci* 255:106-115, 1975.
7. Kakumu S, Leevy CM: Lymphocyte cytotoxicity in alcoholic hepatitis. *Gastroenterology* 72:594-597, 1977.
8. Chen T, Leevy CM: Collagen biosynthesis in liver disease of the alcoholic. *J Lab Clin Med* 85:103-112, 1975.
9. Harinasuta U, Zimmerman HJ: Alcoholic steatonecrosis: Relationship between severity of hepatic disease and presence of Mallory bodies in the liver. *Gastroenterology* 60:1036-1046, 1971.
10. Scheig R: Effects of ethanol on the liver. *Am J Clin Nutr* 23:467-473, 1970.
11. Isselbacher KJ, Greenberger NJ: Metabolic effects of alcohol on liver. *N Engl J Med* 270:351, 402, 1964.
12. Patek AJ, Bowry SC, Sabesin SM: Minimal hepatic changes in rats fed alcohol and a high casein diet. *Arch Pathol Lab Med* 100:12-24, 1976.
13. Sabesin SM: Lipid and lipoprotein abnormalities in alcoholic liver disease. *Circulation* 64 (III):72-84, 1981.
14. Freeman MR, Kuiken L, Ragland JB, et al: Hepatic triglyceride lipase deficiency in liver disease. *Lipids* 12:443-445, 1977.
15. Sabesin SM, Ragland JB, Freeman MR: Lipoprotein disturbances in liver disease, in Popper H, Schaffner F (eds): *Progress in Liver Disease*, vol. VI. New York, Grune and Stratton, 1979, pp 243-262.
16. Sabesin SM, Bertram PD, Freeman MR: Lipoprotein metabolism in liver disease, in Stollerman GH (ed): *Advances in Internal Medicine*, vol. 25. Chicago, Yearbook Medical Publishers, 1980, pp 117-146.
17. Sabesin SM, Hawkins HL, Kuiken L, et al: Abnormal plasma lipoproteins and lecithin-cholesterol acyltransferase deficiency in alcoholic liver disease. *Gastroenterology* 72:510-518, 1977.
18. Helman RA, Temko MH, Nye SW, et al: Alcoholic hepatitis—Natural history and evaluation of prednisolone therapy. *Ann Int Med* 74:311-320, 1971.
19. Galambos JT: Alcoholic hepatitis: Its therapy and prognosis, in Popper H, Schaffner F (eds): *Progress in Liver Disease*, vol. IV. New York, Grune and Stratton, 1972, pp 567-588.

CAT Scan of the Month

STEPHEN L. GAMMILL, M.D., and GORDON MATHES, M.D.

A 49-year-old male truck driver was admitted to the hospital complaining of left flank pain, which he described as similar to the pain he had experienced when he was thought to have passed a calculus from his right ureter three weeks previously. Physical examination and urinalysis were normal.

Excretory urography showed the left ureter to be obstructed at the level of the sacrum, the cause of which was undetermined, and nonopacification of the right renal collecting system. Cystoscopy was normal, but bilateral obstructive uropathy was demonstrated on retrograde pyelograms. The cause was not apparent, however. Urine from the right kidney was cloudy, indicating prolonged stasis and probable infection. Drainage catheters were placed and left in the renal collecting systems.

A computerized axial tomogram revealed the diagnosis. Please examine Figures 1 and 2 and see if you can discover the abnormality.

Discussion

In Figure 1, the ureters, filled with contrast material, are seen as small white dots to either side of the aorta and inferior vena cava. In Figure 2, note that the ureters are surrounded by fibrous connective tissue. In the normal patient, there is a distinct dissection plane between the aorta and inferior vena cava, whereas in this patient no such dissection plane is present. It has been obliterated by fibrous connective tissue. The diagnosis is retroperitoneal fibrosis.

Under general anesthesia, the abdomen was opened and the ureters dissected free from a dense fibrous plaque using a right angle clamp and sharp dissection with scissors. Fatty tissue was then brought under the ureters and secured to the medial peritoneum above the fibrous plaque. A frozen section biopsy of the fibrous plaque showed no tumor. After an appendectomy was performed, the abdomen was closed. The postoperative course was free of complications, and both renal collecting systems functioned well on an excretory urogram ten days postoperatively.

Retroperitoneal fibrosis usually attacks patients between 40 and 60 years of age, affecting men twice as often as women. It has been associated with methysergide ingestion, which theoretically produces an autoimmune reaction in the walls of the blood vessels of the abdomen that leads to surrounding fibrosis. The patient pre-

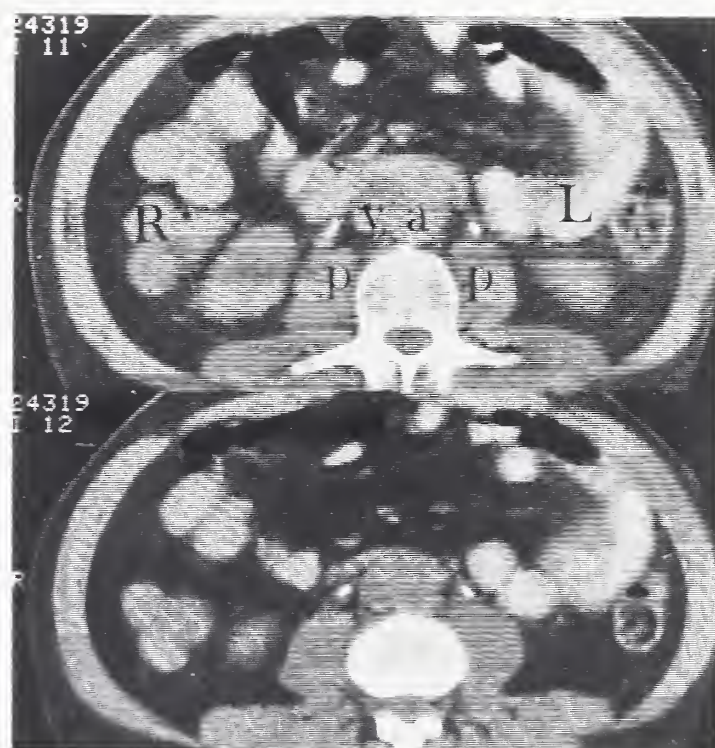


Figure 1. Computerized tomographic cuts caudal to the kidneys (a = aorta, v = vena cava, R = right, L = left, P = psoas muscle). Note that the dissection planes between the vena cava and aorta are indistinct. The ureters (white dots lateral to the vena cava and aorta) are not encased at this level.

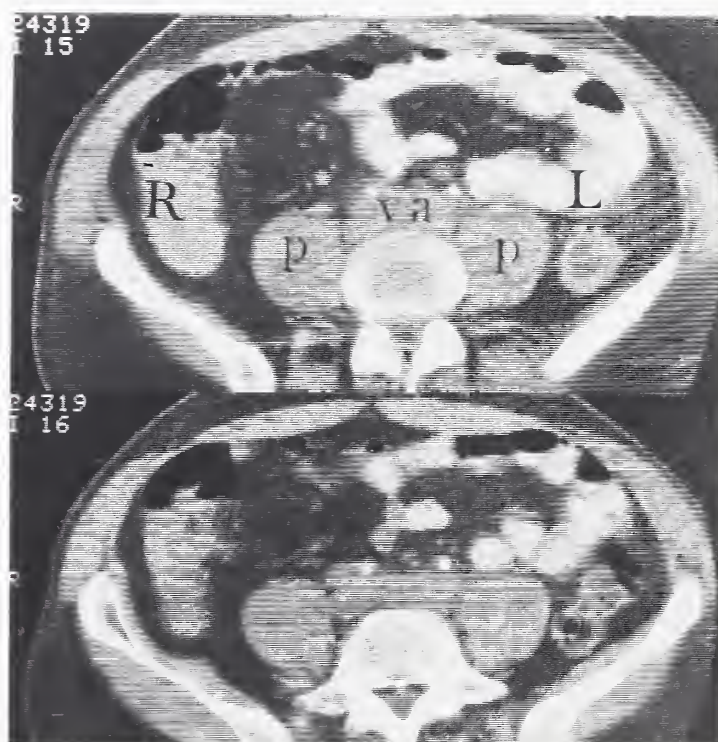


Figure 2. Cuts caudal to the ones in Figure 1. Lower one at the aortic bifurcation. Note that the ureters are encased by the fibrous connective tissue at these levels.

From the Departments of Radiology and Urology, Baptist Memorial Hospital, 899 Madison Ave., Memphis, TN 38146.

(Continued on page 755)

A Problem in Pacing

W. BARTON CAMPBELL, M.D.

An 83-year-old retired executive was admitted to St. Thomas Hospital following an undisplaced subcapital fracture of the left hip. During his rehabilitation he had episodes of syncope associated with abrupt bradycardia. An atrio-ventricular (AV) sequential pacemaker (Cordis Sequicor Theta) was implanted.

This AV sequential pacemaker should allow better cardiac stroke value by maintaining atrial contraction prior to ventricular depolarization. It is programmed to pace either atrium or ventricle, to sense atrial or ventricular depolarization, and to inhibit atrial pacing if atrial depolarization occurs. Atrial depolarization in turn triggers ventricular pacing at an appropriate AV delay. The pulse generator will also function in the standard ventricular-inhibited mode.

A 24-hour ambulatory electrocardiogram obtained the next day showed the following rhythm strip (Fig. 1).

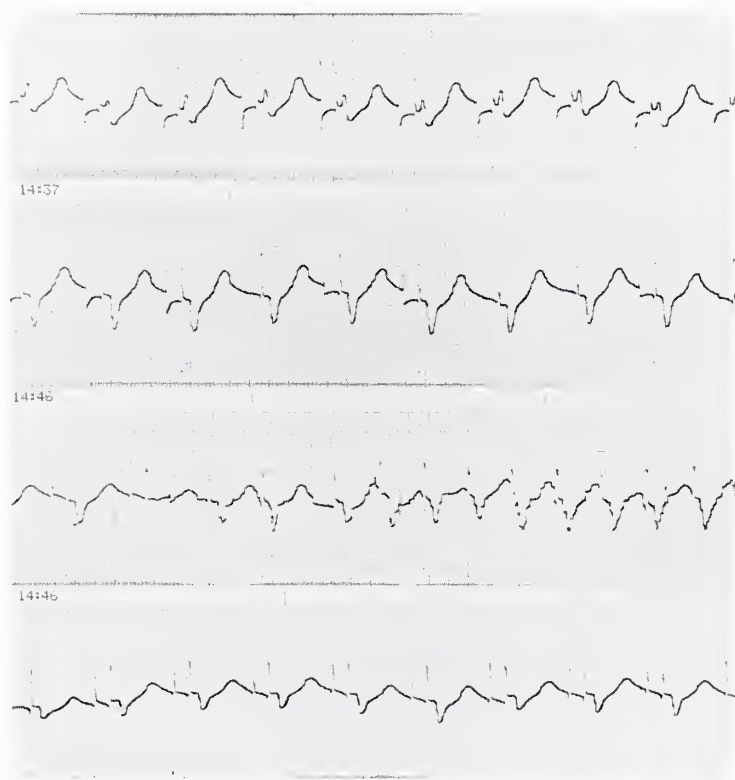


Figure 1

Discussion

The top two strips show an atrial followed by a ventricular pacemaker depolarization spike with a rate of 71/min. The interval between atrial and ventricular spike is .165 seconds (165 msec). P waves are not identified. In the strip labeled 14:37 the atrial spike is intermittently absent. The atrial spike should follow the preceding QRS complex (or ventricular pacing spike) by 650 msec unless inhibited by a P wave. P waves may commonly be missed in a single lead and the absent pacing spikes are probably due to atrial inhibition (Fig. 2).

A striking change in rhythm is present in the strip 14:46. The second ventricular spike (fourth spike from the left, Fig. 2) fails to capture and is not followed by a QRS complex. The next spike

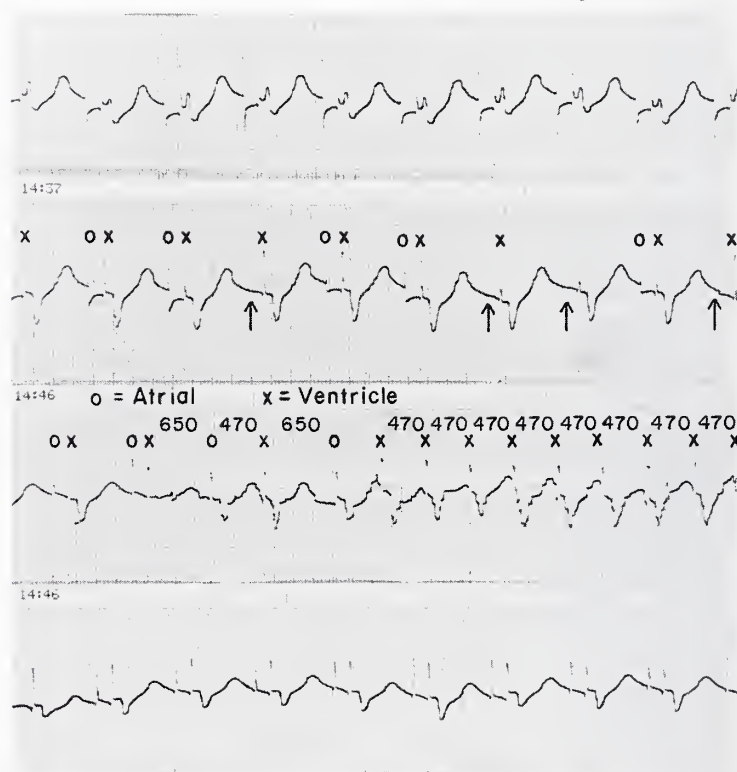


Figure 2. In strip 14:37—note absent atrial pacing spikes denoted by arrows. In strip 14:46—note two atrial pacing spikes followed by ventricular ectopic beats. Ventricular spike occurring after these ectopic beats occurs before programmed pacing time and is due to "pacemaker reentry." (O = atrial pacing spike; X = ventricular pacing spike.)

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

occurs 650 msec later and is therefore an atrial spike. However, it is followed by a QRS complex. As this QRS complex follows an atrial spike, it clearly is not paced and is therefore a ventricular ectopic beat. The pacing spike immediately following this ventricular ectopic beat occurs with an inappropriately short interval of 470 msec. This spike is closely followed by a QRS complex suggesting that it is a ventricular spike capturing the ventricle. The QRS complex is followed by a pacing spike, again occurring at the 650 msec atrial interval and is an atrial pacing spike. The following QRS, therefore, is also a ventricular ectopic beat and initiates a repetitive series of spikes occurring at the 470-msec interval (Fig. 2).

The pulse generator is programmed with an atrial refractory period of 305 msec. It has an atrial to ventricular delay of 165 msec. Thus the 470-msec interspike interval is composed of atrial sensing of a P wave 305 msec after the QRS complex triggering a ventricular spike 165 msec later. This spike captures the ventricle. Retrograde AV conduction then causes atrial depolarization (not seen on these strips) resulting in repetition of this process. The pacemaker thus provides a bypass tract and results in a reentry tachycardia (Fig. 3). Retrograde P waves (not discerned in this tracing) have been documented to occur very commonly in ventricular ectopy.¹ This type of repetitive, reentry, pacemaker-induced tachycardia has been previously described in a patient with an atrial synchronous pulse generator.²

The pulse generator used in this patient is highly programmable. When the rate is increased to 80/min the AV delay is increased to 250 msec. It can also be switched to a 2:1 block mode with

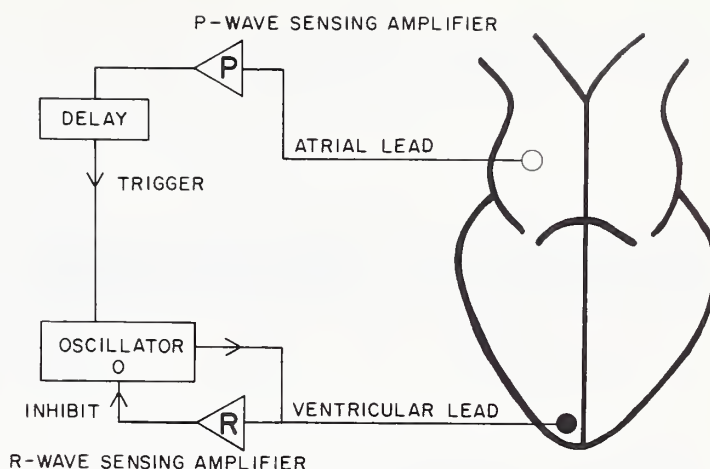



Figure 3. In the atrial triggered mode the P wave sensing amplifier senses a P wave falling outside its refractory period (305 msec) and (unless inhibited by a QRS complex) initiates a ventricular pacing spike 165 msec later.

the total atrial refractory period equaling the maximum rate.

This patient has no hemodynamic effects from his dysrhythmia. The pacemaker was nonetheless reprogrammed to a rate of 80/min, altering the AV delay to 250 msec. He has had no further episodes of pacemaker-induced tachycardia.

CONCLUSIONS: (1) AV sequential pacemaker allowing pacemaker (reentry) tachycardia, (2) intermittent inhibition of atrial pacing spike, (3) lack of ventricular capture (single beat). 

REFERENCES

1. Kistin A, Landdowne M: Retrograde conduction from premature ventricular contractions, a common occurrence in the human heart. *Circulation* 3:738, 1951.
2. Tolentino AO, Javier RP, Byrd C, et al: Pacer-induced tachycardia associated with an atrial synchronous ventricular inhibited (ASVIP) pulse generator. *Pace* 5:251, March-April 1982.

CAT Scan of the Month . . .

(Continued from page 753)

sented here was on no medication, so his case was idiopathic, as are many others. Retroperitoneal fibrosis has also been associated with tumors of the abdomen (lymphoma, carcinoid and others), other fibrosing diseases (fibrous mediastinitis, retractile mesenteritis, and sclerosing cholangitis), vasculitis, and Riedel's thyroiditis. The fibrosis may encase the aorta, inferior vena cava and bowel. Computerized tomography is specific

in arriving at a diagnosis, since the dissection planes of the aorta and vena cava are obliterated and encasement of the ureters can be demonstrated. Treatment consists of surgery as needed, with steroids postoperatively in case of recurrence.

FINAL DIAGNOSIS: Retroperitoneal fibrosis. 

Refugees in Tennessee—An Overview

STERLING E. BENTLEY

Introduction

The end of the Vietnam War in 1975 and ensuing events resulted in increased migration of Southeast Asians into the United States. The federal Center for Disease Control (CDC) and Office of Refugee Relocation (ORR) reported that 565,835 Southeast Asian refugees entered the United States by the end of 1981. Although similar data for Tennessee were not available, it has been estimated that from 3,273 to 7,000 refugees resided in the state on Dec. 31, 1981.

The primary reason for the range in this estimate is that refugees are not required to notify the U.S. Immigration and Naturalization Service of their movement in the United States. Therefore, the number migrating from one state into another (secondary or unofficial migration) is unknown. During 1981, a total of 1,078 Southeast Asian refugees entered Tennessee from another country (primary or official migration) and an additional 510 entered between January and July, 1982.

Extrapolation of data in this overview should be done with caution because of the difficulty in tracking refugee movement and the variations of health problems of refugees from different countries.

Demographic Information

A total of 1,078 Southeast Asian refugees officially entered Tennessee in 1981. Table 1 shows that 45% or 481 were under the age of 18 and less than 8% or 83 were over 44 years of age. Of the arriving refugees 55% were male and 45% female.

From the Tuberculosis and Chronic Disease Section, Tennessee Department of Public Health, Nashville.

Table 2 presents the birthplace and country of citizenship of refugees. Although the country of citizenship is unknown for a significant number of refugees, 83% or 899 were from Kampuchea, Laos, and Vietnam.

The county of destination, where refugees decided to live, in Tennessee is shown in Table 3. Davidson, Hamilton, Rutherford and Shelby

TABLE 1
AGE AND SEX

Age	Male	Female	Total
0-5	71	77	148
6-11	87	77	164
12-17	100	69	169
18-24	142	84	226
25-44	158	130	288
45-64	33	37	70
65 up	5	8	13
Total	596	482	1,078

TABLE 2
BIRTHPLACE AND CITIZENSHIP

Country	Birthplace	Citizenship
Hong Kong	3	0
Indonesia	1	0
Kampuchea	269	268
Laos	470	458
Philippines	4	0
Thailand	44	0
Vietnam	189	173
Unknown	97	179
Total	1,078	1,078

Counties received 81.5% of the official arrivals in 1981. The county of residence for the remaining 18.5% was 11 other counties or unknown.

Voluntary Agencies

Four voluntary agencies (volags), i.e., U.S. Catholic Conference, Lutheran Immigration and Refugee Service, World Relief Refugee Service, and Church World Service resettle about 97% of official refugees entering the state. The remaining 3% are resettled by individual sponsors and other groups.

Overseas Health Assessment

As a condition for entering the United States, all refugees receive a health assessment at a staging center or camp in Southeast Asia. The assessment, which is monitored by the CDC, includes screening for tuberculosis, venereal diseases, leprosy, and mental disorders.

Refugees diagnosed as having a class A medical condition are not permitted to enter the United States without a "waiver of excludability" from the Immigration and Naturalization Service. The class A diseases are active tuberculosis, infectious leprosy, five venereal diseases (syphilis, gonorrhea, chancroid, granuloma inguinale, lymphogranuloma venereum) and certain mental conditions (past or present insanity, severe personality disorders, including chronic alcoholism or drug addiction, and mental retardation). Refugees with infectious tuberculosis, infectious leprosy, narcotic addiction, or chronic alcoholism are currently prohibited from receiving a waiver. All other refugees are medically approved to enter the United States.

Notification of Arrival

The CDC notifies the Tennessee Department of Public Health and the respective county health departments when refugees who plan to move to Tennessee arrive at a U.S. port of entry. A special notification is also sent to the state and county health departments for refugees with any of the excludable medical conditions. All medical records accompany the refugee who is instructed to report to a specific county health department in Tennessee.

Tennessee Health Assessment

On arriving at a county or metropolitan health department, refugees have their medical records reviewed and receive another health assessment. The assessment, which is recommended for all

TABLE 3
COUNTY OF DESTINATION

Blount	16	Knox	22
Bradley	1	Monroe	5
Cocke	1	Montgomery	3
Davidson	351	Rutherford	97
Franklin	4	Shelby	309
Greene	2	Sullivan	1
Hamilton	122	White	6
Johnson	1	Unknown	59

refugees by CDC, generally includes a tuberculin skin test for persons who are not documented tuberculin reactors, chest x-ray for those over 35, a serologic test for syphilis for post-puberty refugees, stool examination for ova and parasites, and a dental check-up. Immunization records are reviewed and any necessary immunizations are given. Refugees needing care not available by a health department are referred to another provider.

The metropolitan or county health officer is responsible for providing or assuring treatment, referral and follow-up of refugees with public health problems, including communicable diseases.

Major Public Health Concerns

Data from Tennessee, other states, and CDC indicate that tuberculosis is the most serious health problem of refugees. From 1% to 3% have tuberculous disease and up to 50% are tuberculin reactors at risk of developing tuberculous disease. An example of the problem in Tennessee is the 50 refugees currently receiving treatment for tuberculosis and the 966 reactors placed on preventive drug therapy for tuberculous infection during the past two years.

Intestinal parasites are common in Indo-chinese refugees. Surveys in various areas of the country, including Tennessee, indicate that up to 64% of the refugees have parasites, with hookworm the most common. Less prevalent but other significant health concerns include sexually transmitted diseases, anemia, dental problems, leprosy, malaria and mental disorders.

Additional information regarding refugee health services may be obtained from your local health department or the Division of Tuberculosis Control, at (615) 741-7241.

MEDICAL ACCOUNTING SYSTEM

- **MEDICARE ELECTRONIC PROCESSING**

Medicare claims may be processed electronically. Eliminates forms printing, filing and retrieving. Known as the paperless claim concept which saves time, reduces administration cost, and improves cash flow. Software available for most computers or will install complete system.

- **MEDICAL MANAGEMENT SYSTEM**

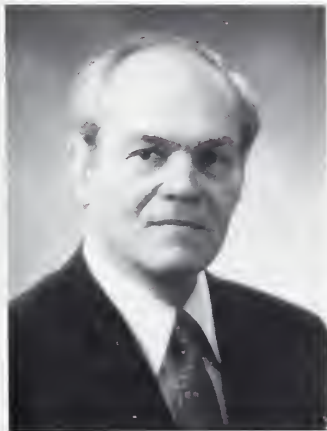
This system provides a comprehensive set of software for:

- Electronic Processing of Medicare Claims
- Appointment Schedules for Each Doctor
- Superbill/Demand Bill Processing
- Electronic Patient Accounts Receivable Ledgers
- Patient Statements
- Collection Reports
- Insurance Forms
- Collections and Adjustment Reports
- Transaction Registers
- Route Slip Report
- Aged Accounts Receivable
- Doctor Production Reports
- Collection Letter Selection Report
- Deposit Report and Register

COMPUTER TECHNOLOGY COMPANY

**P. O. Box 15562
Nashville, Tennessee 37215
(615) 794-7385**

A Hi-Technology Company



GEORGE W. HOLCOMB, JR.

The Outreach of Government

One of the most crucial issues facing medicine today is the power of the Federal Trade Commission to exercise authority over non-profit associations composed of professional men and women. I wish to elaborate on the background and current status of this controversy with regard to the medical profession.

The FTC first challenged the ethical principles and actions of any professional association in December 1975 when it complained that the American Medical Association was engaged in anticompetitive activities by prohibiting physician advertising, solicitation and contract practices. After lengthy hearings before this administrative agency, the AMA appealed the FTC restrictions to the Court of Appeals and in March 1982 the Supreme Court upheld the FTC position by rendering a split decision (4-4). This litigation required seven years and the expenditure of \$3.4 million in legal fees alone. As a result of spending all this time and money in litigation, no substantive changes were imposed against the AMA activities.

The FTC was created by Congress in 1914 to deal with industrial and commercial businesses in which regulation by an administrative agency with expertise in these fields was thought to be desirable. The original intent of the legislation did not encompass professional activities and the commission made no attempt to include them until the last few years. Through the years Congress has even excluded certain businesses from the FTC's purview, including banks, savings and loans, unions and common carriers. Organized medicine's resistance to the FTC jurisdiction does not in any way imply that we are seeking complete exemption from governmental authority as has been claimed. On the contrary, we believe that existing state regulations are adequate to deal with unfair methods of competition within the professions. The current antitrust laws are applicable to all professional associations. Legal action to prevent anticompetitive activities may be brought in federal court by the Department of Justice, by any state attorney general and by private individuals. It is the medical profession's assertion that there is no justification for the FTC's intrusion into the regulation of non-profit professional activities or the practice of medicine.

If a federal agency is allowed to be the regulator of professional societies, no longer will we be able to set the standards by which medicine is practiced and medical care is measured. If established professional standards and ethics are bypassed and laws duly enacted by sovereign states are preempted by the FTC, then the medical care in this country is headed for mediocrity in the name of antitrust. State and local medical associations will no longer be able to impart information to the public about questionable or unproven practices within the expanding health care area. On the national level, the American Society of Anesthesiologists, the American Society of Plastic and Reconstructive Surgeons and others have already been subjected to investigation by the FTC. These national specialty societies whose major objectives are maintenance of high standards and continuing education are not immune to oversight and further challenge.

Today, any professional organization is vulnerable to administrative inquiries and possibly a prolonged hearing in which a decision will be rendered by an FTC judge. This has already been experienced by medical groups in California, Florida, Arizona, Connecticut, Maine and our own TMA. The amount of time and money that must be allocated for a hearing is in itself enormous. One medical society in California spent an initial \$1 million in a disputed action to publish a relative value study. The commission viewed this as price fixing in spite of its advantage to consumers. The expenditure in time and money to contest a restriction in court is even more staggering.

The total cost of responding to the FTC complaints must also include the value of services to the public and to physicians necessarily curtailed by reallocation of funds and imposition of commission restrictions. The TMA is greatly concerned that it will be patients who suffer the most if our resources and efforts must be diverted from our primary goals. Americans currently enjoy the finest standard of medical care in the world. This has resulted from the concerted efforts of our scientific societies and medical associations to maintain self-policing policies and the highest standard of care.

The question of jurisdiction of the FTC must be decided by the legislative process. Two bills (S 2499, HR 3722) before Congress have the power to define its authority, and these deserve our wholehearted support. This will be a momentous decision and will determine the future of American medicine and the quality of care. Clearly, Congress should force the Federal Trade Commission out of the medical field which is already satisfactorily regulated by the U. S. Department of Justice and in each state by the attorney general and various licensing boards.

George Holcomb Jr MD

Journal of the Tennessee Medical Association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication

Address papers, discussions and scientific matter to
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson
GEORGE W. SHANNON, M.D., Jackson
CLAUDE H. CROCKETT, JR., M.D., Bristol
H. VERDAIN BARNES, M.D., Chattanooga
FRANCIS W. GLUCK, JR., M.D., Nashville
JOHN B. THOMISON, M.D., Nashville, Ex-Officio

NOVEMBER, 1982

editorials

On the Ascent of Man

Not so long ago the earth held a fraction as many of us as now, and twice as many animals. No engine roared louder than the wind, and at night the moon outshone all other lights. There were uncharted wastes, lost hills, and hidden valleys. People left their families to wander for months or years, never able to send word home. They found strange animals and fertile lands and kingdoms that had never touched their own. Now the earth has given up its secrets. They reside within a billion human heads. And lest we forget, we keep glossy color satellite photographs of each square mile of the surface of the planet.

—John Perkins

To the Ends of the Earth

I grew up being taught in school that the principal difference between man and the lower animals is man's ability to reason. I have always questioned that, as all the pets I ever had showed what I considered such ability. Our cat, for instance, knows that to go through a closed door she has to turn the knob. Many times I have watched her climb onto a chair near the door and try, only to give up because, one, she is not strong enough to turn the knob, and two, she cannot grasp it properly, even when it is between her two forepaws. On the other hand, she can turn a light with a pull chain on and off at will. Her problem (excluding size) is that she has no opposing thumb. I have always thought this might be what makes man physically superior, particularly to the other primates. Recent research has confirmed my suspicions.

The animals I have watched over the years—and there have been a lot of them—have all shown great curiosity, another attribute of man, and another one that is not exclusively his. One thing I have noted about those animals, though, is that they know danger when they see it, and will not risk destruction simply to satisfy their curiosity.

Not so man. And a good thing, too, else we would be the poorer—and the sicker, since yellow fever, for example, might never have been conquered without the willingness of James Carroll, who lived, and Jesse Lazear, who did not, to risk their lives in its conquest. Medical annals are filled with similar examples. So are the annals of exploration, with tales of countless explorers who have climbed their Everests simply "because it was there." No lower animal would be so brash. But then those animals have never reached the moon.

Dealing with the abstract, though, seems to be the domain of man alone. His imagination has pushed him beyond the confines of his little world, first over the hills to the next valley, and the next, then on to distant oceans and across them, building his towers of Babel to grasp at the heavens, and finally reaching them in gleaming spacecraft—always venturesome, always pushing farther and farther outward and away, and changing, not always for the better, but changing still the face of his world.

The trip within is no less fraught with peril. It requires equally as much stamina and courage to face oneself and one's relationships with other selfs, to reach out and touch the One that man innately knows is beyond himself. Ever so many

have turned away from that One, sometimes refusing to acknowledge His existence, but more often simply ignoring Him as not worth their time, blinded by the more proximate world. It is the explorations of the Spirit that most set man apart from the lower animals; yet in his drive to subjugate the physical universe and to stretch his abstractions to the limit, man too frequently avoids this highest aspect of his life's adventure. Venturesome in all other areas, he deprives himself of life's most satisfying moments. Filled with his own importance and basking in the glories of his accomplishments, enthralled by the brilliance of his own creativeness, man fails to grasp the most important, to recognize the source of all his glory, and return the glory to that One.

It has been decreed that on Thanksgiving Day man turn aside from his usual pursuits of prying the secrets from the earth and changing its face, and turn instead with thanksgiving to the One who gave them to him and who makes possible all those pursuits—the One “in whom we live and move and have our being.”

Is that what you do on Thanksgiving Day? Or is Thanksgiving Day for you simply another day—a day perhaps to sleep a little later, perhaps to watch a football game, and certainly to add an inch or so to your girth? In this land no power exists to force you or anyone else to give thanks; in fact, the citizens of lands where there is such power have much less to give thanks for. That is why Thanksgiving Day was established. That freedom—which includes the freedom to give thanks or not to—is our most gracious gift. We protect it best by acknowledging its source, and giving appropriate thanks.

J.B.T.



Happy
Thanksgiving

Southern Exposure

In 1870 the great water-colorist Winslow Homer painted a scene on an isolated beach near Manchester, Massachusetts. Though it now hangs in the Metropolitan Museum of Art in New York, to contemporary critics it was not a popular work,

mainly because of its drab coloration. The center of attraction is three young women clad in the bathing costumes of the day, which customarily covered everything but face and hands. The face of one of the subjects is covered by her hair, and another has her back turned. It has been considered a strange picture, in that though physically close, the ladies have their backs to one another, and appear completely detached psychologically as if each were alone. The interesting thing for our purposes, though, is that in wringing the water from her ankle-length skirt, one of them has uncovered her legs from the knees down, and another, sitting on the beach to remove a shoe, has exposed a similar expanse of one leg.

It is not on record that this shocking exposure of sinful flesh caused any particular outcry, but it is a fact that when a short time later the painting was published as a wood engraving in *Harper's* the offending limbs had been covered by ankle-length drawers—and the beach had been made more populous, and also more inviting, even if the girls had not.

I have little recollection of what the women wore when I first went to the beach at age 8, but I do remember that my bathing suit and my father's had tops like the tank tops of today. By the time I was in high school men had graduated to trunks only, but the women's suits still had legs of sorts on them, and skirts—short ones, but still skirts. It was, then, if a shocker for the dowagers, a treat for the men when one of the more shapely young ladies showed up at the club pool one summer—about 1937, I think—in a white, tight-fitting suit with (gasp, snort) *no skirt!*

Then along in the late sixties the bikini made its appearance. Of course the bikini of those days was practically a Mother Hubbard compared to what is around today, but it was the beginning of the end (no pun intended). It accompanied the mini-skirt. I recall that when times began to get bad in the early seventies, and skirts, along with the faces, began to lengthen (it should, of course, be the other way around), one rather elderly gentleman was heard to murmur that the lights were going off all over the world. He probably was thinking, as he recalled the famous quote from the early days of World War II, that they would not go on again during his lifetime.

Be that as it may, whatever skirts might have done, the bathing suits (if they can now be called that) did not follow them. I was mulling all this over a couple of weeks back as I sat on my balcony overlooking the beach at Sea Island, Geor-

gia, watching the passing parade. It occurred to me that there are always a few that are ahead of the crowd. But, as in Kansas City, where everything is up to date, they've gone about as far as they can go and still cover up anything at all. To be ahead of the crowd now, I suppose they will have to join Mr. Homer back on his beach in Massachusetts.

J.B.T.



A Nation Under God

To the Editor:

I was very interested in the last three paragraphs of your editorial "Eating Crow." I agree wholeheartedly and reverently with your statement that a conceptus is an individual and subject to God's law if not man's law. We know that if a man, say 50 years of age, does not die of disease, accident or murder, 12 months later he will be 51 years of age. Logically, if a conceptus does not die of disease, accident or murder, 12 months later there will be a 3-month-old infant boy or girl.

There is no "just cause" to forfeit any life, regardless of current laws made by man. No man can justify taking anything, including life, he cannot give or return. That is the sole discretion of our maker, God.

There are many of us who *do not* believe we live at the sufferance of our own society, but by the grace of God.

You are getting close to the meat of the problem in the second half of your next to last paragraph, where you very correctly say that the courts and legislative branch are having a lot of trouble with this and both seek to shift the responsibility to science. They will continue to have trouble with this until man finally acknowledges that they don't have the answer, but God has now and always has had. "Thou Shalt Not Kill."

This nation was conceived when Martin Luther nailed his 95 theses to the door and began the Reformation. The basic idea is that man's only obligation is to God and that he, man, is therefore not subject to mental, physical or religious slavery to any man or man-made regimes that are contrary to God's law. This fertilized ovum resulted in the infant United States of America where man was entitled to "life, liberty, and the pursuit of happiness." But, this infant nation was "under God," and God's law.

Since God's laws are absolutes, man's problems have mounted and will continue to mount in direct proportion to the distance man places himself from God's absolutes. This is substantiated by the history of man.

Presently, libertarians and secular humanists have made man their God. It is this false philosophy that is the religion of the day in the United States and, consequently, the underlying reason for the innumerable problems in our current society.

Until this nation returns to its original premise of "one nation under God" our problems will only multiply.

Robert N. Sadler, M.D.
330-23rd Avenue, North
Nashville, TN 37203



Guy Maness, age 83. Died September 15, 1982. Graduate of Washington University School of Medicine in Missouri. Member of Nashville Academy of Medicine.

Julius J. Matzelle, age 70. Died July 10, 1982. Graduate of Medicinski Fakultet Sveucilista u Zagrebu, Yugoslavia. Member of Nashville Academy of Medicine.



The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

Robert Henry Creech, M.D., Chattanooga
Donald G. Caughran, M.D., Chattanooga
Vin-Paul Hua, M.D., Palmer
George L. Kirkpatrick, M.D., Chattanooga

MAURY COUNTY MEDICAL SOCIETY

Charles D. Wilburn, M.D., Columbia

MONTGOMERY COUNTY MEDICAL SOCIETY

Ronald K. Wibking, M.D., Clarksville

ROANE-ANDERSON COUNTY MEDICAL SOCIETY

Robert E. Gentry, M.D., Oak Ridge

TIPTON COUNTY MEDICAL SOCIETY

Jesse James Cannon, Jr., M.D., Covington

WHITE COUNTY MEDICAL SOCIETY

Bernard Martin Cohen, M.D., Sparta

WILLIAMSON COUNTY MEDICAL SOCIETY

Barry J. Brown, M.D., Nashville

personal news

James T. Craig, Jr., M.D., Jackson, has been elected to Fellowship of the International College of Surgeons.

Don J. Hall, M.D., Knoxville, has been elected to full membership in the Society of Gynecologic Oncologists.

Stephen C. Prinz, M.D., Knoxville, has been elected to Fellowship in the American Academy of Pediatrics.

TMA Members Receive AMA Physician's Recognition Award

Twenty-eight TMA members qualified for the AMA Physician's Recognition Award during August 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

Arnulfo A. Agbunag, M.D., Madison
Ralph I. Barr, M.D., Columbia
Henry B. Brackin, Jr., M.D., Nashville
Larry D. Burke, M.D., Memphis
Harold W. Burnette, M.D., Johnson City
Oscar W. Carter, M.D., Nashville
David A. Chadwick, M.D., Chattanooga
James P. Davis, Jr., M.D., Chattanooga
Stephen S. Feman, M.D., Nashville
Herbert C. Gardner, M.D., Memphis
Mehrdokht Hajghassemal, M.D., Memphis
Jeffrey S. Harris, M.D., Nashville
John R. Hilsenbeck, Jr., M.D., Memphis
George L. Holmes, III, M.D., Nashville
Sue B. Hudson, M.D., Memphis
Norton H. Hutchison, M.D., Shelbyville
Ambrose M. Langa, M.D., Columbia
Albert J. Mitchum, M.D., Erin
John R. Nelson, Jr., M.D., Knoxville
Stanley R. Payne, M.D., Chattanooga
Conchita T. Pecache, M.D., Madison
E. Harris Pierce, M.D., Cleveland
Richard W. Quisling, M.D., Nashville
Robert C. Reeder, M.D., Memphis
John C. Rodgers, Jr., M.D., Knoxville
Clyde G. Smith, M.D., Memphis
Raymond H. Webster, M.D., Springfield
William O. Whetsell, Jr., M.D., Memphis

medical news in tennessee

General Bralliar Appointed Air Force Surgeon General

Lt. Gen. Max B. Bralliar became Surgeon General of the U.S. Air Force, effective Aug. 20, 1982, prior to which he had served as command surgeon, U.S. Air Force in Europe and command surgeon, U.S. European Command.

Gen. Bralliar was born in Nashville, Tenn., receiving his bachelor of science degree from Madison College, Tennessee, and MD degree from Loma Linda (California) University in 1950. He began his internship at Nashville General Hospital in July 1950, and entered on active military duty in October 1950. He continued his internship under the Air Force Institute of Technology program.

After completing his internship in October 1951, Gen. Bralliar served as a medical officer with the 434th and 464th Troop Carrier Wings at Camp Atterbury, Indiana, and Lawson Air Force Base, Georgia. In February 1953, General Bralliar entered the Ochsner Foundation in New Orleans to serve a three-year residency in surgery and a one-year residency in proctology.

He supported 15 National Aeronautics and Space Administration manned space flights as part of the launch site recovery teams, and was one of four flight surgeons on the teams for eight of the ten manned flights of Project Gemini. He also acted as flight surgeon on the teams for three of the Apollo missions plus all manned Sky Lab flights.

Gen. Bralliar is a Fellow of the American College of Surgeons, a Fellow of the American Proctologic Society and a senior member of the Air Force Society of Clinical Surgeons. He is certified by the American Board of Colon and Rectal Surgeons, and holds the aeronautical rating of chief flight surgeon.

Gen. Bralliar is married to the former Audrey Batson of Clarksville. They have three sons.

national news

From the AMA's Office in Washington, D.C.

FTC Bulletin: Counter-Attack . . .

More than 150 physicians from across the nation, including the presidents of 36 state medical societies, have met in Washington, D.C., to map a final assault

to convince Congress the Federal Trade Commission threatens the quality of medical care.

The state delegations and top officers of the American Medical Association called on scores of key senators and congressmen as voting time appeared to grow close on proposals to strip the FTC of jurisdiction over state-regulated professions and to impose a moratorium on FTC action against professionals and their associations.

"We expect to win," declared James Sammons, M.D., Executive Vice President of the AMA. Dr. Sammons told a news conference that 220 members of the House, a majority, have endorsed the moratorium bill. And he noted that the Senate Commerce Committee approved 10 to 5 legislation to remove the FTC's powers over professionals. (Subsequent to the news conference, the Senate Appropriations Committee also approved a one-year suspension of the FTC's authority over physicians and other professionals by a 14 to 5 vote.)

The "chilling effects" of continued FTC jurisdiction over physicians was described to reporters by Joseph Boyle, M.D., Chairman of the AMA Board of Trustees. Peer review activities, hospital review committees, and specialty society standards could be jeopardized by FTC actions, Dr. Boyle said.

"The whole structure of medical society attempts to protect patients from incompetent physicians, from fraud and abuse, will be called into question and could collapse," Dr. Boyle warned.

John Coury, Jr., M.D., an AMA Board member, told the news reporters that local medical societies are afraid to warn the public against "certain entrepreneurs" who are hurting patients because the FTC might take action against the societies. "The FTC permits quacks to carry out false and misleading advertising in their practice, and permits the crumbling of the excellent peer review system in this country," said Dr. Coury.

If Congress allows the FTC to continue its "harassment," then Congress "must accept the responsibility for destroying peer review and the quality of medical care in this nation," the physician said.

The threat the FTC poses to the health care coalition movement was outlined at the news conference by Dennis O'Leary, M.D., acting medical director of the George Washington University hospital and president-elect of the Medical Society of the District of Columbia.

Dr. O'Leary said the agency appears to be "antithetical to the whole cost containment effort" embodied by the business-professional-public coalitions. "The FTC is all over us, like a rag," he said, noting that the agency's only go-ahead so far to such coalitions has been permission to publish data.

On the eve of the congressional visits, Dr. Sammons appeared on the Public Broadcasting TV show MacNeil-Lehrer Report to debate James Miller, FTC chairman.

Dr. Sammons said the FTC's ruling against the AMA in the case involving ethical codes on advertising "has made it virtually impossible for the profession to root out fraud and deception."

The AMA official pointed out that the Justice Department traditionally has had jurisdiction over the

professions and that not until seven years ago did the FTC take action against professionals. "There has not been one scintilla of evidence that Congress intended for the FTC to enter this area."

Miller, a Reagan administration appointment, told the PBS network audience the anti-FTC legislation would provide a privileged class under antitrust laws and would make the professions immune from laws against fraud and deception. He said many health and business groups as well as the Justice Department and most state attorneys general have opposed the legislation restricting the FTC's scope.

Dr. Sammons said it is "totally inaccurate" to suggest that the AMA is seeking to exempt physicians from the antitrust laws. He noted the Justice Department's long history of actions involving professionals in anti-trust cases, including a historic case against the AMA in the early 1940s.

The FTC's recent presence in the field "is clearly expensive and duplicative," he said, "an intrusion into an arena that is the province of the Justice Department."

The agency has been carrying out "fishing expeditions" for records and documents that have cost medical organizations "incredible sums of money" to comply with, according to the AMA official. Dr. Sammons said the AMA spent seven years and \$5 million in fighting the FTC's "needless" complaint against the AMA's ethical guides on advertising.

Some provisions of the FTC's ruling against the AMA would prevent the AMA and medical societies from being patients' advocates in fee disputes and hamper physicians' ability to police misleading advertising, he said.

The FTC isn't equipped to deal with professional ethical problems and insists on treating medical practices as if they were simple commerce, Dr. Sammons said.

"We're not selling widgets or electronic devices."

"There are strong implications of disruption of quality of care involved in the FTC's actions against the AMA," said Dr. Sammons.

At the news conference, Dr. Boyle told reporters the public needs to understand the repressive nature of FTC's authority over the professions. He cited the recent case of the Maine Medical Association which received a sudden order from the Boston office of the FTC to turn over within two weeks all documents relating to physician reimbursement dating back five years. A request for a two-week extension to comply with the sweeping request was summarily refused. "That's what is going on today," Dr. Boyle said.

Since 1977, there have been 17 instances of FTC actions against medical societies and in only one—the case involving the AMA—has the case finally gone to court. In all others the FTC obtained consent decrees or dropped the actions.

Dr. Boyle noted that the California Medical Association, faced with an FTC action on relative value studies, spent \$1 million on legal fees before deciding it could not afford to fight the case further and entered into a consent decree settlement. By contrast, in a similar case brought by the Justice Department against the Anesthesia Society, the case went to court and was won by the society at a total expense of less than one-

third that borne by the California Association.

In the days following the press conference AMA President William Rial, M.D., in a letter to the *New York Times*, said the American people "do not want a federal bureaucracy interfering with the cost and quality of their personal medical care."

Dr. Rial noted that the AMA isn't seeking complete exemption from the antitrust laws for physicians, since the Justice Department would continue to oversee the antitrust statutes. "To add the FTC as a regulator and one more layer of government is not in the best interest of either physicians or patients," he said.

"We believe it is in the public interest . . . to leave regulation of professionals under courts of law and not to a duplicative and costly bureaucracy," Dr. Rial wrote.

Writing in the new USA TODAY newspaper, AMA Board Chairman Boyle said medical care in this country is the best in the world.

"This was achieved long before the FTC became involved; it has been endangered more than helped by FTC regulation," said Dr. Boyle.

The AMA officer said the FTC has paralyzed the staffs of medical societies with subpoenas and requests for documents. State societies have been warned of antitrust implications in deciding physicians' qualifications, access to facilities, contracts with providers and disciplinary action against dishonest or incompetent physicians.

"Cost containment has been seen by the FTC as collusive price fixing," wrote Dr. Boyle.

In a letter to all senators and representatives, the AMA said "the FTC's intrusion into the regulation of professions forces the professions—those with expertise—to abandon desirable self-regulation because of the fear of an action by an over-zealous agency and the fear of financially debilitating litigation."

The lawmakers were told that Congress never granted the FTC authority to pursue the professions and that in 1977 Congress rejected an amendment that would have given FTC that authority.

. . . and on to the Lame Duck!

An extraordinary "lame duck" session of Congress has been requested by President Reagan to force the lawmakers to approve separate appropriations bills to keep the government operating this fiscal year.

The alternate likely would have been passage of a continuing resolution, a combined package which would carry more spending than Reagan wants and which would have been difficult to veto.

From the standpoint of health legislation, the President's action could mean less money for some health programs at the Health and Human Services Department. The extra session also brightened chances for passage of health measures still pending before Congress.

These include the controversial reauthorization of the Federal Trade Commission and the efforts of the

professions to remove the agency's jurisdiction over them.

The health planning program is up for reauthorization. The issue to be settled is whether the program is killed outright or allowed to continue on a severely reduced basis.

The authorization for the National Institutes of Health is another bill waiting for final action. The key debate here is on proposals to establish a new institute on arthritis.

Important drug bills are nearing final action. One would extend for seven years the patent-life of prescription drugs and another offers financial aid for production of orphan drugs.

Tougher labeling for cigarette packages and tougher and more uniform penalties for drunk driving are other health-related matters still before Congress.

In his message to Congress, Reagan said he feels strongly that "attempting to run the federal government without a proper budget—with a series of temporary continuing resolutions—and the associated overall budgetary uncertainty—amounts to both bad economics and bad management."

As the situation now stands, Congress will recess early in October and come back about Nov. 29 to finish the money bills. Nothing precludes the lawmakers during the "lame duck" session from taking up other measures.

Insanity Defense Under Attack

The administration has asked Congress to restrict sharply the insanity defense in federal cases.

The legislation sent to Capitol Hill by the administration met a receptive audience. Many lawmakers have introduced bills on the insanity defense as a result of criticism of the verdict in the case of John Hinckley, Jr., for his assassination attempt on President Reagan.

The administration proposal would limit insanity as a defense to cases where the defendant has no understanding of what he has done. In the words of Associate Attorney General Rudolph Giuliani, the defense would be applicable to "someone who had the mental age of a 2-year-old or believed they were shooting at a tree when in fact they were shooting at a human being."

The controversy concerns the verdict of innocent by reason of insanity. The use of insanity as a mitigating factor in sentencing is not at issue. Many bills in Congress would restrict insanity to the "guilty but insane" defense.

In his message to Congress, President Reagan said the present rule "permits the introduction at trial of massive amounts of conflicting and irrelevant testimony by psychiatric experts, thereby complicating the trial process and deflecting the attention of the jury from the critical issues."

"A confusing swearing contest between the opposing psychiatrists," was how the President described the present testimony in cases where the sanity is an issue.

announcements

CALENDAR OF MEETINGS

NATIONAL

- Dec. 2-3 American College of Chemosurgery—New Orleans
- Dec. 2-4 International Symposium on Medical Virology (sponsored by Dept. of Pathology, Univ. of California-Anaheim)—Disneyland Hotel, Anaheim
- Dec. 4-9 American Academy of Dermatology—New Orleans
- Dec. 5 American Society for Dermatologic Surgery—New Orleans
- Dec. 9-12 American Academy of Psychoanalysis—Del Coronado, San Diego
- Dec. 15-19 American Psychoanalytic Association—Waldorf Astoria, New York
- Dec. 18-Jan. 1 Fifth Annual Winter Seminar, Selective Reviews in Medicine (sponsored by Dade County, Fla., Medical Assoc.)—Aspen, Colo.
- Jan. 17-19 Society of Thoracic Surgeons—Hilton Hotel, San Francisco
- Jan. 23-29 Southern Clinical Neurological Society—Sarasota, Fla.
- Jan. 29-Feb. 3 American College of Allergists—Hyatt Regency, New Orleans
- Jan. 31-Feb. 3 Winter Ski and Study Symposium (sponsored by chapters 1 and district IX, Amer. Academy of Pediatrics)—Caesar's Hotel, Tahoe, Calif.
- Feb. 9-14 Multidisciplinary Microsurgery at the Mardi

- Feb. 11-13 Gras Symposium (sponsored by Southern Baptist Hospital)—New Orleans.
- Feb. 12-19 Society of University Surgeons—Sheraton Hotel, Oklahoma City.
- Feb. 12-19 Winter Symposium on Hematologic Malignancies (sponsored by Univ. of Arizona Cancer Center, Tucson)—Snowbird, Utah.
- Feb. 13-18 Sports Medicine Symposium for Family Practitioners (sponsored by Cleveland Clinic and Univ. of Vermont)—Sugarbush, Vt.
- Feb. 16-19 International Conference of the Association for Children and Adults with Learning Disabilities—Hilton Hotel, Washington, D.C.
- Feb. 16-20 American College of Psychiatrists—Hilton Hotel, New Orleans.
- Feb. 23-March 1 Adolescent/Young Adult Medicine (sponsored by Hurley Medical Center, Flint, Mich.)—Wailea Beach Hotel, Maui, Hawaii.
- Feb. 28-March 4 International Academy of Pathology, US-Canadian Division—Hilton Hotel, Atlanta.

EMORY UNIVERSITY

- Dec. 3-5 Medical and Scientific Writing: A Symposium and Workshop—Woodruff Medical Center, Administration Building Auditorium, Atlanta. (Any medical or scientific investigator interested in sharpening his writing skills and improving the quality of his manuscript and its chances of publication should benefit from this program.)

For information contact Leroy J. Pickles, Director, Continuing Medical Education, Emory University School of Medicine, 319 WMCAB, Atlanta, GA 30322, Tel. (404) 329-5695

NEW POETRY CONTEST

A \$1,000 grand prize will be awarded in the upcoming poetry competition sponsored by World of Poetry, a quarterly newsletter for poets.

Poems of all styles and on any subject are eligible to compete for the grand prize or for 99 other cash or merchandise awards, totaling over \$10,000.

Says Joseph Mellon, contest chairman, "We are encouraging poetic talent of every kind, and expect our contest to produce exciting discoveries."

Rules and official entry forms are available from the World of Poetry, 2431 Stockton Blvd., Dept. D, Sacramento, CA 95817.

Federal Trade Commission Order

The final Order of the Federal Trade Commission (AMA Board of Trustees Report HH, submitted to the House of Delegates at the 1982 Annual Meeting) as modified by the U.S. Court of Appeals for the Second Circuit in the AMA case follows. The AMA Board of Trustees presented the Order for the purpose of delivery by the individual delegates to the organizations that they represent.

UNITED STATES OF AMERICA BEFORE THE FEDERAL TRADE COMMISSION

COMMISSIONERS:

James C. Miller III, Chairman
David A. Clanton

Michael Pertschuk
Patricia P. Bailey

In the Matter of
THE AMERICAN MEDICAL ASSOCIATION,
a corporation,
THE CONNECTICUT STATE MEDICAL SOCIETY,
a corporation,
THE NEW HAVEN COUNTY MEDICAL
ASSOCIATION, INC.

DOCKET NO. 9064

MODIFIED ORDER TO CEASE AND DESIST

Respondents having filed in the United States Court of Appeals for the Second Circuit a petition for review of the Commission's cease-and-desist order issued herein on October 12, 1979; and the Court having rendered its decision and judgment on October 7, 1980, affirming and enforcing the commission's order with modification of Parts I and II; and the Supreme Court of the United States having affirmed by an equally divided court the judgment of the court of appeals on March 23, 1982, and having denied a petition for rehearing on May 3, 1982:

NOW, THEREFORE, IT IS HEREBY ORDERED, that the aforesaid order to cease and desist be, and it hereby is, modified in accordance with the decision and judgment of the Court of Appeals to read as follows:

ORDER

I.

IT IS ORDERED that respondent American Medical Association, and its delegates, trustees, councils, committees, officers, representatives, agents, employees, successors and assigns, directly or indirectly, or through any corporate or other device, in or in connection with respondent's activities as a professional association in or affecting commerce, as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Restricting, regulating, impeding, declaring unethical, interfering with, or advising against the advertising or publishing by any person of the prices, terms or conditions of sale of physicians' services, or of information about physicians' services, facilities or equipment which are offered for sale or made avail-

able by physicians or by any organization with which physicians are affiliated;

B. Restricting, regulating, impeding, declaring unethical, interfering with, or advising against the solicitation, through advertising or by any other means, including but not limited to bidding practices, of patients, patronage, or contracts to supply physicians' services, by any physician or by any organization with which physicians are affiliated; and

C. Inducing, urging, encouraging, or assisting any physician, or any medical association, group of physicians, hospital, insurance carrier or any other non-governmental organization to take any of the actions prohibited by this Part.

Nothing contained in this Part shall prohibit respondent from formulating, adopting, disseminating to its constituent and component medical organizations and to its members, and enforcing reasonable ethical guidelines governing the conduct of its members with respect to representations, including unsubstantiated representations, that respondent reasonably believes would be false or deceptive within the meaning of Section 5 of the Federal Trade Commission Act, or with respect to uninvited, in-person solicitation of actual or potential patients, who, because of their particular circumstances, are vulnerable to undue influence.

II.

IT IS FURTHER ORDERED that respondent American Medical Association, and its delegates, trustees, councils, committees, officers, representatives, agents, employees, successors and assigns, directly or indirectly, or through any corporate or other device, in or in connection with respondent's activities as a professional association in or affecting commerce,

as "commerce" is defined in the Federal Trade Commission Act, do forthwith cease and desist from:

A. Restricting, regulating, impeding, advising on the ethical propriety of, or interfering with the consideration offered or provided to any physician in any contract with any entity that offers physicians' services to the public, in return for the sale, purchase or distribution of his or her professional services, except for professional peer review of fee practices of physicians;

B. Restricting, interfering with, or impeding the growth, development or operations of any entity that offers physicians' services to the public, by means of any statement or other representation concerning the ethical propriety of medical service arrangements that limit the patient's choice of a physician;

C. Restricting, interfering with, or impeding the growth, development or operations of any entity that offers physicians' services to the public, by means of any statement or other representation concerning the ethical propriety of participation by non-physicians in the ownership or management of said organization; and

D. Inducing, urging, encouraging, or assisting any physician, or any medical association, group of physicians, hospital, insurance carrier or any other non-governmental organization to take any of the actions prohibited by this Part.

III.

IT IS FURTHER ORDERED that respondent American Medical Association cease and desist from taking any formal action against a person alleged to have violated any ethical standard promulgated in conformity with this Order without first providing such person with:

- A. Reasonable written notice of the allegations against him or her;
- B. A hearing wherein such person or a person retained by him or her may seek to rebut such allegations; and
- C. The written findings or conclusions of respondent with respect to such allegations.

IV.

IT IS FURTHER ORDERED that respondent American Medical Association:

A. Send by first class mail a copy of a letter in the form shown in Appendix A to this Order to each of its present members and to each constituent and component organization of respondent, within sixty (60) days after this Order becomes final.

B. For a period of ten years, provide each new member of respondent and each constituent and component organization of respondent with a copy of this Order at the time the member is accepted into membership.

C. Within ninety (90) days after this Order becomes final, remove from respondent American Medical Association's *Principles of Medical Ethics* and the Judicial Council's *Opinions and Reports*, and from the constitution and bylaws and any other existing policy statement or guideline of respondent, any provision, interpretation or policy statement which is inconsistent with the provisions of Parts I and II of this Order and, within one hundred and twenty (120) days after this Order becomes final, publish in the *Journal of the*

American Medical Association and in *American Medical News* the revised versions of such documents, statements, or guidelines.

D. Require as a condition of affiliation with respondent that any constituent or component organization agree by action taken by the constituent or component organization's governing body to adhere to the provisions of Parts I, II, and III of this Order.

E. Terminate for a period of one year their affiliation with any constituent or component organization within one hundred and twenty (120) days after learning or having reason to believe that said constituent or component organization has engaged, after the date this Order becomes final, in any act or practice that if committed by respondent would be prohibited by Part I, II, or III of this Order.

V.

IT IS FURTHER ORDERED that respondent American Medical Association:

A. Within sixty (60) days after the Order becomes final publish a copy of this Order with such prominence as feature articles are regularly published in the *Journal of the American Medical Association* and in *American Medical News* or in any successor publications.

B. Within one hundred and twenty (120) days after this Order becomes final, file a written report with the Federal Trade Commission setting forth in detail the manner and form in which it has complied with this Order.

C. For a period of five (5) years after this Order becomes final, maintain and make available to the Commission staff for inspection and copying upon reasonable notice, records adequate to describe in detail any action taken in connection with the activities covered by Parts I and II of this Order, including but not limited to any advice or interpretations rendered with respect to advertising, solicitation, or contract practice involving any of its members.

D. Within one year after this Order becomes final, and annually thereafter, for a period of five (5) years, file a written report with the Federal Trade Commission setting forth in detail any action taken in connection with the activities covered by Parts I and II of this Order, including but not limited to any advice or interpretations rendered with respect to advertising, solicitation or contract practice involving any of its members.

VI.

IT IS FURTHER ORDERED that respondent American Medical Association shall notify the Commission at least thirty (30) days prior to any proposed change in the respondent, such as dissolution, assignment, or sale resulting in the emergence of a successor corporation or association, or any other change in the corporation or association which may affect compliance obligations arising out of this Order.

By the Commission.

SEAL

CAROL M. THOMAS
Secretary

ISSUED: May 19, 1982

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Preventive Medicine	William Schaffner, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

Dec. 3-4	Annual High Risk Obstetrics Seminar and the Everett M. Clayton Memorial Lecture
Dec. 4-5	Update in Anesthesiology

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
Kernit R. Brown, M.D.	
Qamar A. Kahn, M.D.	
Chest Disease	Joseph M. Stinson, M.D.
Paul A. Talley, M.D.	
Edward A. Mays, M.D.	
Dermatology	Thomas W. Johnson, M.D.
David Horowitz, M.D.	
Gastroenterology	Ludwald O. P. Perry, M.D.
Buntwal M. Somayaji, M.D.	
General Medicine	Edward A. Mays, M.D.
Hematology/Oncology	Robert S. Hardy, M.D.
Neurology	Calvin L. Calhoun, Sr., M.D.
Gregory Samaras, M.D.	
Obstetrics and Gynecology	Henry W. Foster, M.D.
Ophthalmology	Axel C. Hansen, M.D.
Orthopedics	Wallace T. Dooley, M.D.
Pathology	Louis D. Green, M.D.
John C. Ashhurst, M.D.	
Pediatrics	E. Perry Crump, M.D.
Surgery	
General	Louis J. Bernard, M.D.
Neurological	Charles E. Brown, M.D.
Thoracic and Cardiovascular	David B. Todd, M.D.
Ira D. Thompson, M.D.	
Urology	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. **Credit:** AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. **Application:** For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

- March 3-5 Pituitary Disorders (cosponsored with Baptist Hospital)
March 20-26 16th Annual Family Practice Review Course

For further information about any of these courses, please call the appropriate individuals below:

Memphis Ms. Jean Taylor Tel. (901) 528-5547
Chattanooga Ms. Jeanne Schmid Tel. (615) 756-3370
Knoxville Ms. Kay Laurent Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

EAST TENNESSEE STATE UNIVERSITY

- Jan. 8-16 Medical Updates IV: A Review of Recent Advances in Medicine—Marriott's Mark Resort, Vail, Colo.
Jan. 21 Seminar in Forensic Medicine
Feb. 24 School Health V: Children's Problems with Schools

For information contact Department of Continuing Medical Education, Box 19660A, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 201 or 204.

IN SURROUNDING STATES

BOWMAN GRAY

- Dec. 9-11 Advanced Pediatric Real-Time Ultrasound Seminar

For information contact James F. Martin, M.D., Postgraduate Course in Medical Sonics, Bowman Gray School of Medicine, 300 S. Hawthorne Rd., Winston-Salem, NC 27103, Tel. (919) 748-4505.

OF SPECIAL INTEREST

KNOXVILLE ACADEMY OF MEDICINE

- Feb. 5-12 4th Annual Knoxville Academy of Medicine Educational Ski Trip—Snowmass, Colo.

For information contact I. Ray King, M.D., 939 Emerald Ave., Knoxville, TN 37917, Tel. (615) 546-5335.

EAST TENNESSEE STATE UNIVERSITY

- Jan. 8-16 Medical Updates IV: A Review of Recent Advances in Medicine—Marriott's Mark Resort, Vail, Colo. *Credit: 15 hours AMA Category 1. Fee: \$150.*

For information contact Department of Continuing Medical Education, Box 19660A, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 204.

PHYSICIAN NEEDED

Jefferson City, Missouri

CHIEF MEDICAL OFFICER for Department of Corrections in Missouri. Administrative work combined with medical duties. Stable employment in a middle class city. Immediate opening.

Contact Melvin Gardner, Personnel Officer, P.O. Box 236, Jefferson City, Missouri 65102.

SUPPORT YOUR ADVERTISERS

Many of the advertisers in this Journal are long-standing patrons of our monthly publication. Their products and services are of the highest quality available. Don't take them for granted. Read their ads!

U.S. POSTAL SERVICE STATEMENT OF OWNERSHIP, MANAGEMENT AND CIRCULATION (Required by 39 U.S.C. 3685)		
1. TITLE OF PUBLICATION Journal of the Tennessee Medical Association		2. DATE OF FILING 9-14-82
3. FREQUENCY OF ISSUE Monthly	4. NO. OF ISSUES PUBLISHED ANNUALLY 12	5. ANNUAL SUBSCRIPTION PRICE \$12.00
6. COMPLETE MAILING ADDRESS OF KNOWN OFFICE OF PUBLICATION (Street, City, County, State and ZIP Code) (Not printers) 112 Louise Avenue, Nashville, Davidson, Tennessee 37203		
7. COMPLETE MAILING ADDRESS OF THE HEADQUARTERS OR GENERAL BUSINESS OFFICES OF THE PUBLISHERS (Not printers) 112 Louise Avenue, Nashville, Davidson, Tennessee 37203		
8. FULL NAMES AND COMPLETE MAILING ADDRESS OF PUBLISHER, EDITOR AND MANAGING EDITOR (This item MUST NOT be blank)		
PUBLISHER (Name and Complete Mailing Address) Tennessee Medical Association, 112 Louise Avenue, Nashville, Tennessee 37203		
EDITOR (Name and Complete Mailing Address) John B. Thomson, M.D., P.O. Box 70, Nashville, Tennessee 37202		
MANAGING EDITOR (Name and Complete Mailing Address) Jean Wishnick, 112 Louise Avenue, Nashville, Tennessee 37203		
9. OWNER (If owned by a corporation, its name and address must be stated and also immediately thereunder the names and addresses of stockholders owning or holding 1 percent or more of total amount of stock. If not owned by a corporation, the names and addresses of the individual owners must be given. If owned by a partnership or other unincorporated firm, its name and address, as well as that of each individual must be given. If the publication is published by a nonprofit organization, its name and address must be stated.) (Item must be completed)		
FULL NAME Tennessee Medical Association		
COMPLETE MAILING ADDRESS 112 Louise Avenue, Nashville, TN 37203		
10. FOR COMPLETION BY NONPROFIT ORGANIZATIONS AUTHORIZED TO MAIL AT SPECIAL RATES (Section 411.3, DMM only) The purpose, function, and nonprofit status of this organization and the exempt status for Federal income tax purposes (Check one) <input checked="" type="checkbox"/> (1) HAS NOT CHANGED DURING PRECEDING 12 MONTHS <input type="checkbox"/> (2) HAS CHANGED DURING PRECEDING 12 MONTHS (If changed publisher must submit explanation of change with this statement.)		
11. EXTENT AND NATURE OF CIRCULATION		
A. TOTAL NO. COPIES (Net Press Run) 5,648		
B. PAID CIRCULATION 1. SALES THROUGH DEALERS AND CARRIERS STREET VENDORS AND COUNTER SALES 5,406		
2. MAIL SUBSCRIPTION 5,402		
C. TOTAL PAID CIRCULATION (Sum of B1 and B2) 5,406		
D. FREE DISTRIBUTION BY MAIL, CARRIER OR OTHER MEANS SAMPLES, COMPLIMENTARY AND OTHER FREE COPIES 142		
E. TOTAL DISTRIBUTION (Sum of C and D) 5,548		
F. COPIES NOT DISTRIBUTED 1. OFFICE USE, LEFT OVER, UNACCOUNTED SPOILED AFTER PRINTING 100		
2. RETURN FROM NEWS AGENTS 100		
G. TOTAL (Sum of E, F1 and F2 - should equal net press run shown in A) 5,648		
H. I certify that the statements made by me above are correct and complete		
SIGNATURE AND TITLE OF PUBLISHER OR BUSINESS MANAGER Rodney Williams Business Manager		

Mediastinal Drainage

A Different Technique

DAVID R. PICKENS, JR., M.D.; J. L. FARRINGER, JR., M.D.;
and RICHARD B. TERRY, M.D.,

Introduction

The mediastinum anatomically encompasses the area from the pleural space on the right to the pleural space on the left, to the vertebrae posteriorly and the sternum anteriorly, and from the thoracic outlet to the diaphragm.

The organs in this anatomical space have been variously described in the literature as "inaccessible" and "difficult to treat," and "where injury or disease is fraught with many complications of a serious nature often resulting in death."

One of the major organs to transverse the length of the mediastinum is the esophagus, an organ subject to many diseases. Perforation, either acutely or chronically, has always been considered serious, and is associated with several of the major causes of inflammation of the mediastinum.

Spontaneous esophageal perforation has been described as "Boerhaave's syndrome," the first case having been reported in 1724. This diagnosis was established at autopsy on Baron Van Wassenaer, grand admiral of the Dutch Fleet.¹ Jacob Mayer first reported its antemortem diagnosis in 1858, and the first surgical repair was reported in 1947.² Without surgical repair, drain-

age, or other definitive treatment, the mortality has varied anywhere from 75% to 90%. Medical management alone has had almost no success.^{2,3}

The treatment of this type of perforation produced many types of reports in various surgical journals. Investigative work has shown the pleural-pulmonary consequences in an experimental model.⁴

Various types of injuries from automobiles or missiles, inflammatory disease, unusual tumors, and other medical problems may affect the mediastinum. The commonest injury to the esophagus is due to instrumentation, but neoplastic disease, nonoperative trauma, spontaneous ulceration, or ingestion of chemicals may all cause esophageal irritation and subsequently esophageal perforation.⁵

One reads of the nonsurgical management of esophageal perforation and of the operative management of esophageal perforations; we will not discuss the details of either of these, but will present one method of mediastinal drainage.

Materials and Methods

In a general hospital, 16 cases of perforated esophagus were found over a ten-year period (Table 1).

Almost every patient had some type of difficulty with swallowing or the ingestion of food, or vomited after choking on food prior to the onset of symptoms. The symptoms usually consisted of

From the Surgery Service, Baptist Hospital, Nashville.
Reprint requests to 1919 Hayes St., Nashville, TN 37203 (Dr. Pickens).

severe chest pain, often associated with back pain with some shortness of breath. The diagnosis in all patients was made on the basis of clinical symptoms, x-ray demonstration of air in the mediastinum, and x-ray studies of the esophagus.

Results

Treatment results are shown in Table 2. Three of the 13 patients that were operated on died from associated complications such as heart failure or massive mediastinitis. Endoscopy in four patients demonstrated perforation in two; the endoscope caused the perforation in two patients. Three patients not operated on responded to conservative management with antibiotics, intravenous medications, and fluids. They later had normal esophageal studies.

Case Report

The patient, seen by one of us several years ago, was a 52-year-old man who was admitted to the hospital because of the acute onset of abdominal pain associated with lower chest pain. He was found to have pancreatitis, for which he was treated for several days, but subsequently his chest pain became more severe, and there was evidence of a perforation of the lower one third of the esophagus. Although there was an associated mediastinal abscess, there was no contamination of the pleural space. Mediastinal fluid was present. At abdominal exploration three days after admission the duodenum was found to be scarred and the pancreas was thickened and scarred. The liver and gallbladder were normal but exploration under the diaphragm revealed thickening adjacent to the esophageal hiatus.

TABLE 1

SIXTEEN CASES OF ESOPHAGEAL PERFORATION

Age	> 50 yrs—11	< 50 yrs—5
Symptoms	< 24 hrs—11	> 14 days—4 2 mos—1
Site of Perforation	Lower 1/3—12	Cervical—4

TABLE 2

TREATMENT RESULTS ON 16 PATIENTS WITH ESOPHAGEAL PERFORATION

	Operative	Non-Operative
Survived	10	3
Died	3	0
TOTAL	13	3

On blunt finger dissection around the esophagus hiatus, an abscess cavity was entered and barium and mediastinum contents as well as a collection of cloudy fluid were removed. Finger dissection could be carried as high as the aorta. Two large sump drains and one large number 30 red rubber rectal tube were inserted into the mediastinum as high as the arch of the aorta, and two other soft drains were placed in the upper abdomen about the liver and under the diaphragm; all drains were brought out through the right side of the abdomen. A Weitzel jejunostomy was done for future feeding.

The patient tolerated this procedure quite well, and was treated with antibiotics, intravenous feeding, and a conservative approach, including needle aspiration of the pleural space and the posterior lateral gutter. A small amount of cloudy fluid was removed, and for safety a small chest catheter was left in place. This catheter never drained and was promptly removed postoperatively. Hyperalimentation, which would be used today, was not available at that time. The sump tubes and the large mediastinal tubes were left in place for approximately three weeks, being shortened gradually before eventual removal. Subsequent barium swallows revealed the esophagus to be entirely healed.

The patient was seen in the office for several months after his release from the hospital. He returned to work promptly and has had no further problems. The size of the esophagus is normal.

Discussion

The management of esophageal perforation depends upon early diagnosis. Skinner et al⁵ report 23 cases treated within 24 hours after perforation in which the primary treatment was primary closure in 12 cases, drainage in three, resection in four, diversion in two, and intubation in two. Two patients died.⁵

The same authors reported 24 patients that had treatment later than 24 hours; there were seven deaths. In this group, three patients had primary closure, five were drained, five were resected, and nine had diverted intubation.⁵ But the need for secondary operations was higher than in the early closure group: ten as opposed to eight patients.

Diagnosis of esophageal perforation, a most common cause of mediastinal inflammation, is often delayed because the physician seeing the patient initially may be more conscious of "crushing pain" in the chest being related to myocardial infarction or pulmonary difficulties than to esophageal damage, rupture, or perforation. Pain from perforation of the esophagus is often localized to the mid-chest, with prompt dissection into the neck and back, but it may be associated with generalized pain to either side of the pleural space. Any physician entertaining the diagnosis of perforation of the esophagus should always consider whether the patient can tolerate a swallow of a radiopaque aqueous material, preferably an absorbable one instead of barium, since barium has been shown to cause severe in-

flammation of the mediastinum and almost as dangerous as gastric contents. The diagnosis of perforation of the esophagus should be considered in any patient with a swallowing difficulty, who may be quite sick, often with fever and complaining of mid-sternal pain.


Sawyers⁶ and his group, reporting on the treatment of 64 patients from the Vanderbilt University Medical Center, advocated an aggressive approach consisting of early closure of the perforation, "adequate drainage," and other supportive surgical treatment. The advent of new antibiotics has increased our ability to handle the various types of infections that occur as a result of such a perforation or chemical irritation from the juices of the stomach. Jara⁷ has advocated the use of a diaphragmatic pedical flap, and the use of a pleural flap has been advocated to support the often precarious primary suture line in the esophagus.

It has always seemed impractical to us to contaminate either pleural space by draining an inflamed, infected mediastinum through it, although this was standard technique in years gone by, even if the etiology was not known. This should certainly be done if the pleural space is indeed contaminated or contains purulent material from the mediastinum, but this is often not the case. With early diagnosis, the surgeon may end up operating on the abdomen for some problem such as perforated gastric or duodenal ulcers, pancreatitis, or a late diagnosis of subphrenic abscess, without finding a reason to enter the pleural space, and still have the origin of the disease process in the mediastinum.

With perforation of the lower esophagus, if the subsequent abscess is primarily in the lower mediastinum, drainage may be undertaken through the abdomen without having to contaminate the pleural space, as was done in our case mentioned above, even though we have not recently seen cases requiring this technique.

Conclusions

Esophageal perforation is a common cause of mediastinitis. Early diagnosis, with primary closure, the use of antibiotics, and other surgical techniques including hyperalimentation apparently give good results. Drainage of the pleural space is necessary if it or the mediastinum has been contaminated or if either pleural space contains purulent fluid. On the other hand, the surgeon may be searching in the abdomen for a perforated ulcer or pancreatitis when the abscess has its origin from the esophagus. When this occurs, draining the mediastinum from below through large sump tubes and soft rubber tubes may be successful. Present-day antibiotics give adequate protection for such an approach to an abscess in the lower one half of the mediastinum. Serial x-rays to follow the process are important, as complications in either pleural space would require the more drastic approach of drainage, direct suture, or some other surgical technique such as diversion or resection.

We have presented a different technique of draining the lower one half of the mediastinum when a physician has been forced to operate in the abdomen. Its success depends on early diagnosis as well as careful placement of the drainage tubes and serial follow up. Perforation of the esophagus should be considered in any patient with severe mid-chest pain. 

REFERENCES

1. Campbell TC, Andrews JL, Neptune WB: Spontaneous rupture of the esophagus (Boerhaave syndrome); necessity and early diagnosis and treatment. *JAMA* 235:526-528, 1976.
2. Mayer JE, Murray CA, Varco RL: The treatment of esophageal perforation with delayed recognition and continuing sepsis. *Ann Thorac Surg* 23:568-573, 1977.
3. Brown RH, Cohen PS: Nonsurgical management of spontaneous esophageal perforation. *JAMA* 240:140-142, 1978.
4. Maulitz RM, Good JT, Kaplan RL, et al: The pleuropulmonary consequences of esophageal rupture: An experimental model. *Am Rev Respir Dis* 120:363-367, 1979.
5. Skinner DB, Little AG, DeMeester TR: Management of esophageal perforation. *Am J Surg* 139:760-764, 1980.
6. Sawyers JL, Lane CE, Foster JH, et al: Esophageal perforation. *Ann Thorac Surg* 19:233-238, 1975.
7. Jara FM: Diaphragmatic pedicle flap for treatment of Boerhaave's syndrome. *J Thorac Cardiovasc Surg* 78:931-933, 1979.

TENNESSEE MEDICAL ASSOCIATION

148th ANNUAL MEETING

April 13-16, 1983

Opryland Hotel, Nashville, Tennessee

Hepatic Uptake of a Bone Scanning Agent in Alcoholic Hepatitis

JANE L. TYLER, M.D., and THOMAS A. POWERS, M.D.

Report of a Case

A 62-year-old male alcoholic was admitted to the hospital for treatment of renal failure. Two weeks earlier, when he was noted to be lethargic and complained of nausea and diarrhea, he was admitted to a local hospital, where he was found to be markedly dehydrated. Initial laboratory values included: uric acid 12 mg/dl, bilirubin 2.3 mg/dl, BUN 260 mg/dl, and creatinine 12 mg/dl. Other liver function studies were not measured initially. The urine contained 16,000 WBCs and cephalixin was prescribed for suspected urinary tract infection. A rash developed, and the antibiotic was changed to a trimethoprim-sulfa-methoxazol combination. His course was complicated by several bouts of epistaxis, decreasing urine output, and continued lethargy, and he was transferred to this institution.

On admission, his temperature was 100.2°F orally, and he had severe postural hypotension and lethargy. His BUN was 227 mg/dl, creatinine 11.3 mg/dl, hematocrit 32%, calcium 5.9 mg/dl, and PO_4 greater than 14 mg/dl. Liver function tests were only mildly abnormal, with LDH 254 U/liter (normal 100-225), SGOT 43 U/liter (normal 7-40), and bilirubin 1.5 mg/dl. Serum iron and iron binding capacities were in the normal range, although, ferritin was elevated at 800 ng/ml (normal 20-200). Hepatitis B surface antigen was negative.

Twelve days following transfer a bone scan was performed because of an abnormal vertebral body seen on abdominal radiograph. There was intense uptake of the radiopharmaceutical by the liver (Fig. 1), and subsequent Tc-99m sulfur colloid liver-spleen scan revealed a normal size liver, intense uptake in an enlarged spleen, and increased marrow uptake (Fig. 2). An abdominal ultrasound revealed altered hepatic texture suggestive of alcoholic liver disease (Fig. 3).¹ Liver function studies obtained the day of the bone scan showed alkaline phosphatase 122 U/liter (normal 30-115), LDH 563 U/liter, SGOT 132 U/liter, and bilirubin 1.3 mg/dl.

To further evaluate the patient's hepatic and renal disorders a gallium-67 citrate study was performed. Scans obtained 72 hours postinjection revealed marked uptake of the radiopharmaceutical by the kidneys (Fig. 4), and a repeat bone scan performed 14 days after the initial study also revealed

hepatic uptake (Fig. 5), although it was slightly less intense than that of the previous study.

The patient's subsequent hospital course was characterized by gradual return of his liver function studies to normal. He became afebrile ten days after admission and his temperature remained normal thereafter. His renal function progressively improved and it was postulated that this abnormality had been due to acute tubular necrosis secondary to infection and dehydration. At the time of discharge all liver function tests were within the normal range, and BUN and creatinine were 54 mg/dl and 1.8 mg/dl, respectively.

Discussion

Hepatic uptake of bone scanning agents has been well documented in cases of primary and metastatic liver neoplasms. Proposed mechanisms include increased blood flow to the neoplasm, microscopic calcifications within metastatic mucinous colonic adenocarcinoma, and the deposition of calcium salts in regions of necrosis.² There are several reports, however, of the absence of calcification in biopsy specimens of hepatic neoplasms that concentrated Tc-99m pyrophosphate³⁻⁵; in these cases, increased amounts of collagen were considered as a possible etiologic factor for the radionuclide uptake.⁴ Although adenocarcinomas of gastrointestinal origin have been the predominant neoplasms reported, other tumors, such as squamous cell carcinomas of the esophagus,⁶ small cell carcinoma of the lung,^{7,8} and carcinoma of the breast⁹ have also been associated with bone-tracer accumulation in hepatic metastases.

Other conditions associated with hepatic uptake of bone scanning agents include amyloidosis¹⁰ and necrotizing enterocolitis,^{11,12} presumably on the basis of early alterations in the local calcium content. Biliary and bowel accumulation have also been seen in 5% to 10% of children in one se-

From the Veterans Administration Medical Center and Vanderbilt Medical Center, Nashville. Dr. Tyler is now with the Montreal General Hospital, Montreal, Quebec.

Reprint requests to Nuclear Medicine Service, VA Medical Center, 1310 24th Ave. South, Nashville, TN 37203 (Dr. Powers).

ries, perhaps reflecting a slight degree of metabolism of phosphate radiopharmaceuticals.¹³

There has been one previous case report of hepatic accumulation of Tc-99m pyrophosphate associated with massive central lobular necrosis,¹⁴ and localization of bone agents in injured or necrotic tissues has been well documented. Accumulation of technetium-labeled phosphates may be due to the influx of phosphates into the

necrotic tissue¹⁵ combined with hypoxia-induced changes in mitochondrial respiration.¹⁶

Chronic iron overload has been associated with decreased bone activity and increased soft tissue accumulation of technetium-labeled bone tracers¹⁷; a specific increase in hepatic uptake in this situation has not been demonstrated. The patient's serum ferritin level was indeed elevated, but the study citing iron overload as the cause

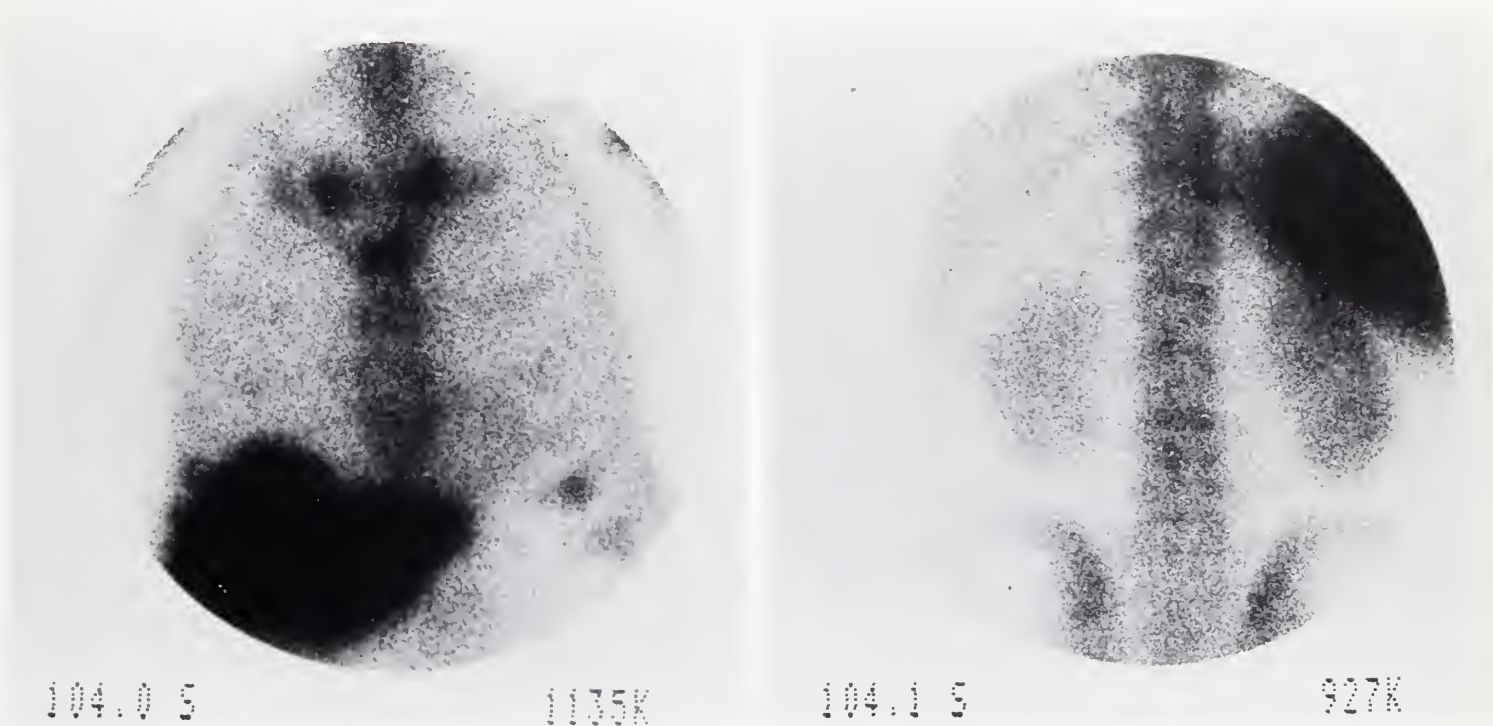


Figure 1. Anterior (left) and posterior (right) bone scans using Tc-99m HDP demonstrates intense uptake of the radionuclide in the liver.

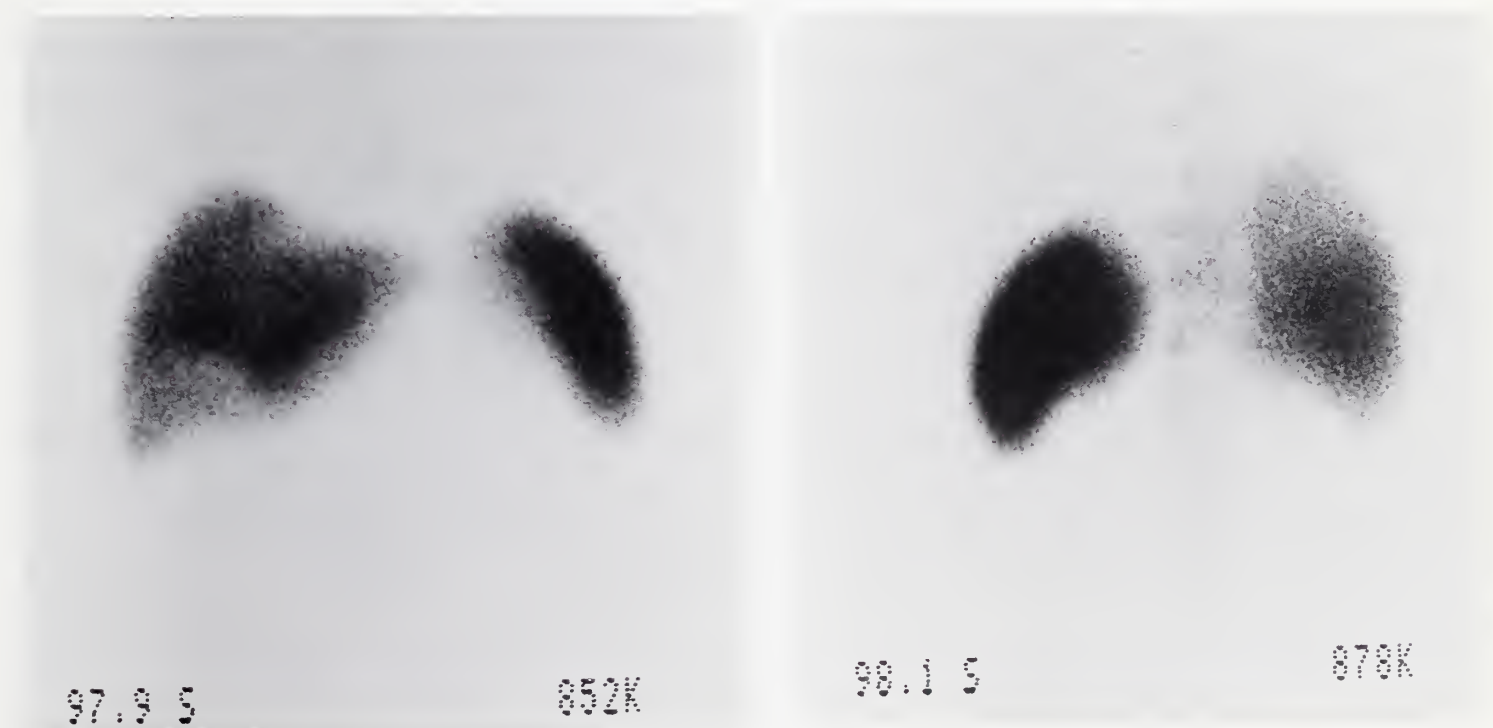


Figure 2. Anterior (left) and posterior (right) liver-spleen scans using Tc-99m sulfur colloid demonstrates decreased hepatic uptake, increased marrow uptake, and splenomegaly.

of increased soft tissue bone tracer accumulation quoted levels three to four times this value.¹⁷

The possibility that the hepatic uptake of the bone tracer was due to artifact caused by the radiopharmaceutical was considered, but other scans performed on the same day using Tc-99m hydroxymethylene diphosphonate (HDP) from the same reaction vial showed no hepatic uptake, making radiopharmaceutical mispreparation unlikely. A repeat study demonstrated similar hepatic accumulation, verifying the result of the original scan.

Experimentally elevated aluminum levels have

been found to form colloidal suspensions with diphosphonates in rats, leading to marked hepatic accumulation of the bone scanning agents.^{18,19} Although the patient had received a 15-day course of antacids during the period of hyperphosphatemia, it is unlikely that this would cause significant accumulation of aluminum. Also, the absence of splenic visualization on the bone scan argues against aluminum colloid formation as the basis for hepatic uptake in this case.

There was no laboratory evidence of viral hepatitis, and the patient's subsequent clinical course was not typical of viral-induced liver disease. The absence of marked hepatic uptake on gallium scan would also argue against an ongoing infectious process.

The intense bone tracer uptake in the liver of this patient is most likely due to alcoholic hepatitis. Clearly, his elevated liver function tests, abnormal liver texture on ultrasound, and abnormal sulfur colloid liver scan attest to the presence of hepatocellular disease. His hospital course, however, revealed no evidence of massive or even significant hepatic necrosis, as was seen in the previous case report.¹⁴ Hepatic toxicity due to cephalexin should also be included in the differential diagnosis, although there was evidence of liver dysfunction before this drug was instituted. Unfortunately a liver biopsy was not obtained.

In conclusion, we believe that the hepatic uptake seen on this patient's bone scan was not due

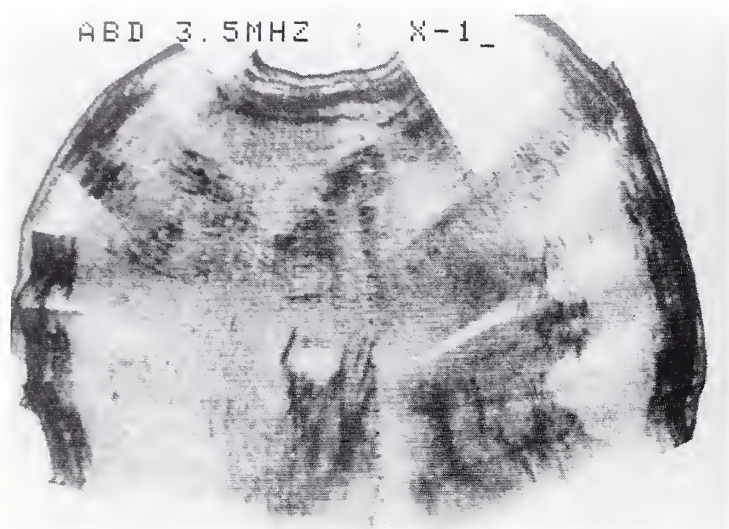
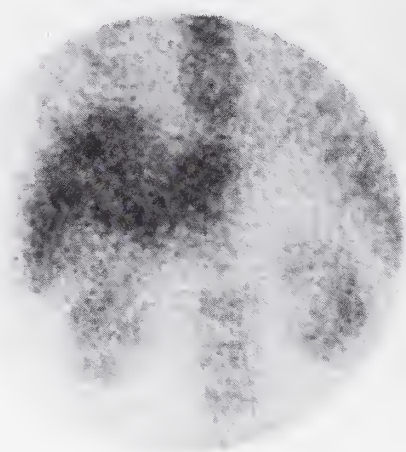
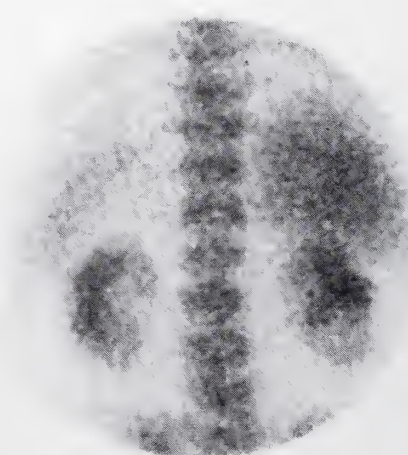


Figure 3. Transverse ultrasound scan of the abdomen 1 cm below the xiphoid reveals dense liver texture and splenomegaly suggestive of alcoholic liver disease.



#1 ANT LIVER



#2 POST. KIDNEYS

Figure 4. Anterior (left) and posterior (right) gallium scans performed 72 hours after injection reveal intense hepatic and renal uptake.



Figure 5. Anterior (left) and posterior (right) Tc-99m HDP bone scan done 14 days after the initial scan demonstrates persistent but less intense hepatic uptake.

to radiopharmaceutical or chemical abnormalities, but was caused by an episode of acute alcoholic hepatitis. Liver visualization on bone scan, therefore, does not necessarily imply the ominous prognosis of the earlier case report.¹⁴

Summary

Whereas it had been previously thought that massive hepatic necrosis was necessary to cause diffuse liver uptake of bone-scanning agents, this report describes a patient who recovered from mild alcoholic hepatitis and whose liver accumulated the bone radiopharmaceutical Tc-99m HDP.

Acknowledgment:

This investigation was supported by the Veterans Administration.

REFERENCES

1. Taylor KJW, Gorelick FS, Rosenfield AT, et al: Ultrasonography of alcoholic liver disease with histological correlation. *Radiology* 141:157-161, 1981.
2. Papavasiliou C: Cancer of the colon visualized by strontium scintigraphy. *J Nucl Med* 15:824, 1974.
3. Balachandran S: Localization of ^{99m}Tc-Sn pyrophosphate in liver metastases from carcinoma of the colon. *Clin Nucl Med* 1:165, 1976.
4. Stevens JS, Clark EE: Liver metastases of colon adenocarcinoma demonstrated on ^{99m}Tc pyrophosphate bone scan. *Clin Nucl Med* 2:270-271, 1977.
5. Garcia AC, Yeh SD, Benna RS: Accumulation of bone-seeking radio-nuclides in liver metastasis from colon carcinoma. *Clin Nucl Med* 2:265-269, 1977.
6. Gaede JT, Wilkinson RH Jr: Concentration of Tc-99m methylenediphosphonate in hepatic metastases from squamous cell carcinoma. *J Nucl Med* 20:303-305, 1979.
7. Que L, Wiseman J, Hales IB: Small cell carcinoma of the lung: Primary site and hepatic metastases both detected on Tc-99m pyrophosphate bone scan. *Clin Nucl Med* 5:260-262, 1980.
8. Kim EE, Domstad PP, Choy YC, et al: Accumulation of Tc-99m phosphonate complexes in metastatic lesions from colon and lung carcinomas. *Eur J Nucl Med* 5:299-301, 1980.
9. Baumert JE, Lantieri RL, Hornig S, et al: Liver metastases of breast carcinoma detected on ^{99m}Tc-methylene diphosphonate bone scan. *Am J Roentgenol* 134:389-391, 1980.
10. Vanek JA, Cook SA, Bukowski RM: Hepatic uptake of Tc-99m labeled diphosphonate in amyloidosis: case report. *J Nucl Med* 18:1086-1088, 1977.
11. Caride VJ, Ablow RC, Touloukian RJ, et al: Abdominal and hepatic uptake of ^{99m}Tc pyrophosphate in neonatal necrotizing enterocolitis, abstracted. *Am J Roentgenol* 133:440, 1979.
12. Caride VJ, Touloukian RJ, Ablow RC, et al: Abdominal and hepatic uptake of ^{99m}Tc-pyrophosphate in neonatal necrotizing enterocolitis. *Radiology* 139:205-209, 1981.
13. Conway JJ, Weiss SC, Khentigan A, et al: Gallbladder and bowel localization of bone imaging radiopharmaceuticals, abstracted. *J Nucl Med* 20:622, 1979.
14. Lyons KP, Kuperus J, Green HW: Localization of Tc-99m pyrophosphate in the liver due to massive liver necrosis: case report. *J Nucl Med* 18:550-552, 1977.
15. Dewanjee MK, Kahn PC: Mechanism of localization of ^{99m}Tc-labeled pyrophosphate and tetracycline in infarcted myocardium. *J Nucl Med* 17:639-646, 1976.
16. Shen AC, Jennings RB: Kinetics of calcium accumulation in acute myocardial ischemic injury. *Am J Pathol* 67:441-452, 1972.
17. Choy D, Murray IPC, Hoschl R: The effect of iron on the biodistribution of bone scanning agents in humans. *Radiology* 140:197-202, 1981.
18. Chadhuri TK: Liver uptake of ^{99m}Tc diphosphate. *Radiology* 119:485-486, 1976.
19. Zimmer AM, Paval DG: Experimental investigations of the possible cause of liver appearance during bone scanning. *Radiology* 126:813-816, 1978.

Views of an LMD

GERALD I. PLITMAN, M.D.

I could paraphrase Will Rogers in saying: "I never met a medical student I didn't like." I have come to know and to like your class particularly well. Therefore, for you to ask me to speak to you today gives me great pleasure. When I asked your class president just what I should say, he replied: "Tell us what it's going to be like 'out there.'" This I can do very simply by saying it's going to be wonderful "out there." I know because I have been "out there" as a physician for over 30 years.

There are certain forces "out there" that have been gaining momentum during the last decade, which will influence your future lives, and with which you must be acquainted. Note that I call them forces, not problems; the difference is that forces exist in the world—problems exist in the mind. I have keenly watched these forces take shape, and I could discuss them with you from the perspectives of several different roles in which I have served as a physician through the years. The perspective I choose, because I think it will have enormous importance in years to come, is that of a type of doctor whom I greatly admire—an LMD.

Now, you learned new doctors know what an LMD is, but for those amongst us who might not, LMD stands for Local Medical Doctor. Although I cannot tell you where the term originated, I can tell you what it connotes; to most who use the term, it implies a practitioner of medicine, more particularly a primary care type physician. In the past, some strict academicians have looked on this type of doctor as being a second class citizen, but let me give you a different slant on it. To me, and in our context today, LMD

signifies an attitude, a frame of mind, more than a particular type of physician. In my view that frame of mind is admirable; it means total commitment to the patient's welfare, and a desire to see the patient's point of view. That is what describes the ideal LMD to me. So be you generalist, specialist, internist, surgeon, researcher, administrator—whatever—the forces I have mentioned will affect you all; you will be better able to cope with them if you maintain the attitude of an LMD. So listen carefully. Here are what I consider to be six major forces, among others, waiting for you "out there."

Force number one has to be economic pressure. It costs too much to be sick, and one can go broke because of a major illness. This is not unique to medicine; everything nowadays costs too much. Economic signs are bad. Yet in the midst of all this, medicine is booming—a paradox of which people are well aware. In fact, expenditure for health care in all its aspects is now probably more than 10% of the gross national product, tens of billions of dollars per year. People are becoming increasingly resentful of the money they have to spend on being sick. This is neither the time nor the place to fragment the medical dollar into just who gets what. Suffice it to say that no matter who gets what, the doctor stands to get the blame. He is the focal point of the entire medical establishment and of what it costs.

Remember, nothing happens until the doctor orders it. We are responsible, so we must take the lead in finding a remedy. The first thing we must do is make a concerted effort to keep costs down—not only the LMDs but also the academicians, because with the cutback in dollars for tax-supported institutions and in research grants, academe is not immune to these economic forces. Of course, we must first be good doctors because the patient's welfare comes before anything; but

From the University of Tennessee Center for the Health Sciences, Memphis. Dr. Plitman is head of the Section of Medical Practice.

Presented at the Dean's Convocation for the graduating class, University of Tennessee Center for the Health Sciences, Memphis, June 12, 1982.

Reprint requests to P. O. Box 12747, Memphis, TN 38112 (Dr. Plitman).

we must realize that all this costs somebody something. We can no longer fall back on the cushion of insurance.

Have you ever considered how privileged we doctors are that our services are actually insured both by private companies and by government? How eloquently this speaks of the value that society places on our services, and of how society trusts us! Insurance, however, is no panacea. Governmental coverage is becoming ever more grudging. Also, private insurance companies are taking a hard look at the fact that medical and health insurance is becoming a money-losing proposition. The same thing could happen here that happened in the field of medical malpractice insurance several years ago—it almost ceased to exist; the insurance became so expensive and such a money-losing proposition that most of the companies abdicated the field. I shudder to think that this might happen to medical insurance.

Every new facet of medical progress, of which we are so proud, escalates costs, sometimes almost beyond our control. Let me give you a brief example. Interferon, a protein made by certain body cells, which may prove effective in fighting viruses and cancer, has received much publicity in both the scientific and lay press of late. Dr. Paul Marks,¹ president of Memorial-Sloan Kettering Cancer Center, in a recent article in *Pharos* quoted an authoritative source that stated that if interferon proves effective and also reasonably safe, worldwide market estimates indicate an annual expenditure for interferon-like substances by the 1990s of between \$3 billion and \$15 billion a year. Wow! Note that this would be a brand new expense that does not even exist now—and this would be added to all the currently existing expenditures. Who knows what other new sources of expense would arise in the meantime?

Another timely example may be the use of monoclonal antibodies for diagnostic and therapeutic purposes. This is an area just in its infancy, but it could become a revolutionary tool in the future. In the same article, Dr. Marks¹ pointed out its astounding potential expense; in 1979 the expenditure for monoclonal antibody technology was approximately \$7 million. Dr. Marks estimates that by 1984, the expenditure for this same technology may reach \$100 million—from \$7 million to \$100 million in just five short years.

Where will all this money come from? I am confident that the American public does not want to stint on the quality of its health care, but I am equally confident that the American public does

not want to stint on its creature comforts either. Can it afford both? If people are unable to afford all this as individuals, and if private insurance leaves the field, government will become increasingly involved. In that event, some predict an inevitable rationing of medical care. On the other hand, the appetite of the American people for medical care may prove insatiable. Politicians may perceive this, and see to it that government furnishes the medical care in unlimited quantities. One hopes that the American economy can expand to accomplish this.

Again, I do not have an answer, but as things now stand, health care costs more and more, and there are more and more doctors purveying it. This is our next major force: a projected, if not already existing, surplus of doctors. Medical education has become a burgeoning industry. Each year the 126 medical schools in our country turn out better than 15,000 new doctors. There is also a large influx of doctors who have graduated from foreign medical schools—tens of thousands of them. The result is that in some areas of the United States there are now too many doctors, and some of them don't have enough to do. I am told that in some communities new doctors are actively discouraged from entering. Some call this a real doctor glut; others say there is no glut, just a maldistribution of physicians.

Most references to a doctor oversupply specifically mention specialty-trained physicians. My feeling is that specialty training is no disadvantage as long as you also have the attitude of the LMD, and make yourself available to people. You can practice good medicine in a community of 500 or 500,000. Grateful patients and good support services are available everywhere. Furthermore, there might not be a doctor glut. The possibly insatiable appetite of the American people for medical care may help to vitiate the feared surplus of doctors. Medical schools may admit fewer students. The expense of a medical education may limit the numbers who seek it. Government may step in and mandate a redistribution of physicians geographically and also by specialty.

A logical outgrowth of a potential doctor surplus may be our next major force—competition in medicine. Through the years we physicians have stood aloof to overt competition, competing with only ourselves to do the best job possible. However, should there be a doctor surplus,

in a free market there will likely be increased use of competitive methods, pitting doctor against doctor with such techniques as advertising and fee wars. The competition will extend beyond the scope of just choice of doctor, and will involve choice of hospital, choice of insurance, and choice of medical care delivery plan. A recent Supreme Court judgment has opened the door to this, and it is already happening in the law profession. If overt competition does develop, good doctors need not fear it. The competent physician who makes himself available will always have plenty of work. Incidentally, speaking of competition, remember that MDs are no longer the only medical professionals on the scene. There is a wide variety of paramedical personnel available to perform certain services that heretofore have been rendered strictly by doctors.

A major force competing with doctors in the future may be industry. As you know, industry offers many medical benefits to its employees. In some areas major industries, with the cooperation of physicians, are beginning to form what are referred to as "coalitions"^{2,3}; these serve as peer review organizations to monitor the performance of doctors who administer this health care. As a logical next step, these industries may actually hire their own doctors and build their own medical establishments. Another potential source of competition may come from, of all places, hospitals. During the last 15 years there has been a tremendous growth in systems of corporate hospitals; some have been darlings of Wall Street. At present, these corporate chains own about 15% of the community hospitals, and half of the psychiatric hospitals, in this country.⁴ Consider also the fact that large private nonprofit hospitals have been absorbing smaller hospitals, as a glance at the Memphis newspapers in the last year would readily tell one. Will this movement stop at mere acquisition of hospitals, or will the hospitals next develop satellite emergency systems, satellite primary care systems, and then eventually hire their own staffs? The day of the private practitioner of medicine, almost the last bastion of rugged individualism, may be coming to an end. The doctor of the future may be a salaried employee of an institution or of a corporate entity, rather than the individual entrepreneur as we now know him.

This consideration of corporate forces brings up the next force—corporate medicine. The decades of the 1950s and 1960s saw a swing from

solo practice toward group practice, a trend that continues and is accelerating. Physician groups are growing larger, are becoming multispecialty in their structure, and are acquiring complex technology. They have built buildings, sometimes even hospitals. Ancillary medical personnel have been added. Business managers have come on board. Federal tax laws have encouraged the incorporation of physicians, and what we now have are not merely groups, but corporate structures. You LMDs of the future, to say nothing of you future academicians, will likely inhabit corporate offices. Some think this will make for more effective medical care, but others bemoan this as a depersonalizing force on medical practice.

This is our next force—depersonalization of medical care—and it is giving rise to yet another force—consumerism. The language of consumerism is this: "I pay and I am entitled."⁵ This seems strangely harsh for a doctor-patient relationship, which I personally have always considered almost hallowed—a perfect complementarity. In a recent *New England Journal of Medicine* editorial the noted Harvard University Medical Economist Rashi Fein⁶ commented on this new relationship and on a new jargon arising from it. You see, we are no longer just *physicians*—we are now *providers* or *vendors*. We no longer have just *patients*—we have *consumers*. Dr. Fein believes that this attitude will have a detrimental effect on the doctor-patient relationship, and perhaps on the quality of medical care. Maybe I am just an idealist, but I think that the hallowed, mystical doctor-patient relationship will survive. It will be stressed by these new forces, because our patients are becoming more sophisticated in their ability to evaluate the competence of medical care, and more insistent that this care be expeditious, and cost-effective (another current catch-phrase). Our patients can perceive inadequacy, and they are impatient with incompetence, as well they should be.

There is another new trend in doctor-patient relationships. The patient of today insists not simply upon being cured, but upon being well—upon being kept well. The emphasis is upon health maintenance. Here you will find a paradox: the same individual who wants to be kept well, and who worries about a few points in a cholesterol level, will drive recklessly home under the influence of alcohol in an automobile, smoking cigarettes, eager to bolt down a meal


full of saturated fat and salt. This you will find a hard trend to buck; he is a hard guy to keep well.

Our final force may come as a surprise to you. It is CME—Continuing Medical Education. Now how can this be considered a new force when we have always done this, have always prided ourselves on keeping up with what is new? It is just possible that some of us have not kept up as well as we thought. In the future, our consumers, and especially those agencies that pay the bills we generate, will want assurance that we are keeping up. Continuing education, heretofore voluntary, may in the future become obligatory. We may even have to submit to qualifying procedures proving our continued competence. Some of these already exist, such as the American Medical Association's Physician's Recognition Award. Another is the American Board of Internal Medicine's recertification examination, inaugurated in 1974. This movement has caught on in a number of other specialties. These are just the initial steps in what in the future may become a process not just of keeping up, but actually of recREDENTIALING. One may have to re-establish one's credentials in order to maintain one's license as a doctor. We may have to pass basic and advanced boards all over again. Other professions may feel this same force.

And while on the subject of education, here is something else that will really interest you. Increasing numbers of medical educators are becoming dissatisfied with medical school as it is now structured.⁷⁻⁹ Quite simply, medical school is tough—perhaps too tough; these educators fear that the fun has been taken out of getting a medical education, so much so that they fear that medical students are being “turned off”—that the impetus for continued medical education may have been stifled. I believe one can foresee a restructuring of medical education in the not too distant future.

These, then, are some of the forces that I believe will shape the future of medicine, and your futures as well. They have arisen because of perceived needs by our patients and by those who pay us. There is no point in arguing with the gen-

uineness of the needs—these forces are here and now. Do not forget, we are a service profession. We will do what our patients want us to do. If we meet these needs and react to these forces thoughtfully and responsively, our opinions will be heeded. Otherwise, the forces may be overwhelming and literally forced upon us. I could quote Mr. Edward Kuhn, a Memphian, who made a statement back in the middle 1960s when he was president of the American Bar Association. He was speaking to lawyers when he said: “If you don't serve the public as it needs to be served, the public will force some kind of change in the profession.”¹⁰ He might just as well have been addressing physicians of today.

In conclusion, in reflecting on these foregoing remarks, I could almost perceive these forces as being problems, were it not for certain important and extremely encouraging considerations. First of all, medicine will always be an exalted and privileged profession. No matter where and under what auspices it is practiced, I can personally think of no more satisfying, intellectually stimulating, nor ennobling endeavor. Most of all, I have confidence in you and in your counterparts from the 125 other schools in this nation. If these other graduates are anywhere near as good as I know you to be, then I know the future will be in good hands. Once again, let me say, believe me, it's great “out there.” I am still “out there,” and I hope to stay “out there” with you for awhile. Come on in, the water's fine. I wish you well. I wish for you the best possible life in this, the best of all possible worlds. 

REFERENCES

1. Marks PA: The impact of recent progress in molecular biology on biomedical academic institutions. *Pharos* 45:2-6, 1982.
2. Rhein RW: The new cost controlled coalitions: Will big business run the show? *Med World News*, Feb 1, 1982, pp 55-64.
3. AMA 1981 Interim Meeting Report. Coalitions for health care. *J Tenn Med Assoc* 75:410-411, 1982.
4. *Med World News*, Jan 18, 1982, pp 26-29.
5. Tarlov A: *Med World News*, March 15, 1982, p 80.
6. Fein R: What is wrong with the language of medicine? *N Engl J Med* 306:863, 1982.
7. Rogers DE: Some musings on medical education; is it going astray? *Pharos* 45:11-15, 1982.
8. Glaser RJ: Has the fun gone out of medical education?, editorial. *Pharos* 45:36, 1982.
9. Eichna LW: Medical school education, 1975-79. A student's perspective. *N Engl J Med* 303:727-734, 1980.
10. Millis JS: The graduate education of physicians. Council on Medical Education. American Medical Association, 1966.

Candidates for nutritional therapy...

10,000,000

alcoholics. Ethanol may produce many effects that together bring about nutritional deficiencies, so that alcoholism affects nutrition at many levels.¹

25,500,000 geriatric

patients. The older patient may have some disorder or socioeconomic problem that can undermine good nutrition.²

23,500,000 surgical

patients. Nutritional status can be compromised by the trauma of surgery; and some operations interfere with the ingestion, digestion and absorption of food.³



Before prescribing, please consult complete product information, a summary of which follows:

Each Berocca® Plus tablet contains 5000 IU vitamin A (as vitamin A acetate), 30 IU vitamin E (as *dl*-alpha tocopheryl acetate), 500 mg vitamin C (ascorbic acid), 20 mg vitamin B₁ (as thiamine mononitrate), 20 mg vitamin B₂ (riboflavin), 100 mg niacin (as niacinamide), 25 mg vitamin B₆ (as pyridoxine HCl), 0.15 mg biotin, 25 mg pantothenic acid (as calcium pantothenate), 0.8 mg folic acid, 50 mcg vitamin B₁₂ (cyanocobalamin), 27 mg iron (as ferrous fumarate), 0.1 mg chromium (as chromium nitrate), 50 mg magnesium (as magnesium oxide), 5 mg manganese (as manganese dioxide), 3 mg copper (as cupric oxide), 22.5 mg zinc (as zinc oxide).

Indications: Prophylactic or therapeutic nutritional supplementation in physiologically stressful conditions, including conditions causing depletion, or reduced absorption or bioavailability of essential vitamins and minerals; certain conditions resulting from severe B-vitamin or ascorbic acid deficiency; or conditions resulting in increased needs for essential vitamins and minerals.

Contraindications: Hypersensitivity to any component.

Warnings: Not for pernicious anemia or other megaloblastic anemias where vitamin B₁₂ is deficient. Neurologic involvement may develop or progress, despite temporary remission of anemia, in patients with vitamin B₁₂ deficiency who receive supplemental folic acid and who are inade-

quately treated with B₁₂.

Precautions: General: Certain conditions may require additional nutritional supplementation. During pregnancy, supplementation with vitamin D and calcium may be required. Not intended for treatment of severe specific deficiencies. **Information for the Patient:** Toxic reactions have been reported with injudicious use of certain vitamins and minerals. Urge patients to follow specific dosage instructions. Keep out of reach of children. **Drug and Treatment Interactions:** As little as 5 mg pyridoxine daily can decrease the efficacy of levodopa in the treatment of parkinsonism. Not recommended for patients undergoing such therapy.

Adverse Reactions: Adverse reactions have been reported with specific vitamins and

100,000 hospital patients with infections.⁴ Many are anorectic and may have a markedly reduced food intake. Supplements are often provided as a prudent measure because the vitamin status of critically ill patients cannot be readily determined.³

The incalculable millions on calorie-reduced diets. Patients ingesting 1000 or fewer calories per day could be at high risk because this intake may not supply most nutrients in adequate amounts without supplementation.⁵



Berocca Plus

A balanced formula for prophylactic or therapeutic nutritional supplementation.

Berocca Plus Tablets provide: therapeutic levels of ascorbic acid and B-complex vitamins; supplemental levels of biotin, vitamins A and E, and five important minerals (iron, chromium, manganese, copper and zinc); plus magnesium. Berocca Plus is not intended for the treatment of specific vitamin and/or mineral deficiencies.

Berocca Plus, highly acceptable to

patients, has virtually no odor or aftertaste and is economical. And its "Rx only" status means more physician involvement, better patient compliance.

References: 1. Shaw S, Lieber CS: Nutrition and alcoholism, chap. 40, in *Modern Nutrition in Health and Disease*, edited by Goodhart RS, Shils ME. Philadelphia, Lea & Febiger, 1980, pp. 1220, 1237. 2. Watkin DM: Nutrition for the aging and the aged, chap. 28, in *Modern Nutrition in Health and Disease*, *op. cit.*, p. 781. 3. Shils ME, Randall HT: Diet and nutrition in the care of the surgical patient, chap. 36, in *Modern Nutrition in Health and Disease*, *op. cit.*, pp. 1084, 1089, 1114. 4. Dixon RE: *Ann Intern Med* 89 (Part 2): 749-753, Nov 1978. 5. Committee on Dietary Allowances, National Research Council: Recommended Dietary Allowances, ed 9. Washington, National Academy of Sciences, 1980, p. 13.

erals, but generally at levels substantially higher than those in Berocca Plus. However, allergic and idiosyncratic reactions are possible at lower levels. Iron, even at the usual recommended levels, has been associated with gastrointestinal intolerance in some patients.
Dosage and Administration: Usual adult dosage: one tablet daily. Not recommended for children. Available on prescription only.
How Supplied: Golden yellow, capsule-shaped tablets—bottles of 100.

ROCHE LABORATORIES
Division of Hoffmann-La Roche Inc.
Nutley, New Jersey 07110

candidates for

Rx ONLY **Berocca® Plus** TABLETS

THE MULTIVITAMIN/MINERAL FORMULATION

Radiology Case of the Month

STEVEN MOORE, M.D. and RANDALL L. SCOTT, M.D.

An asymptomatic 66-year-old man came for a routine follow-up barium colon examination after a right hemicolectomy for adenocarcinoma two years ago. An air contrast barium enema performed one year ago was normal (with an ileocolic anastomosis at the proximal transverse colon). A selected film from the current examination is presented (Fig. 1). The best diagnosis is:

- (1) Familial polyposis
- (2) Pneumatosis cystoides intestinalis
- (3) Granulomatous colitis
- (4) Colitis cystica profunda
- (5) Recurrence of adenocarcinoma

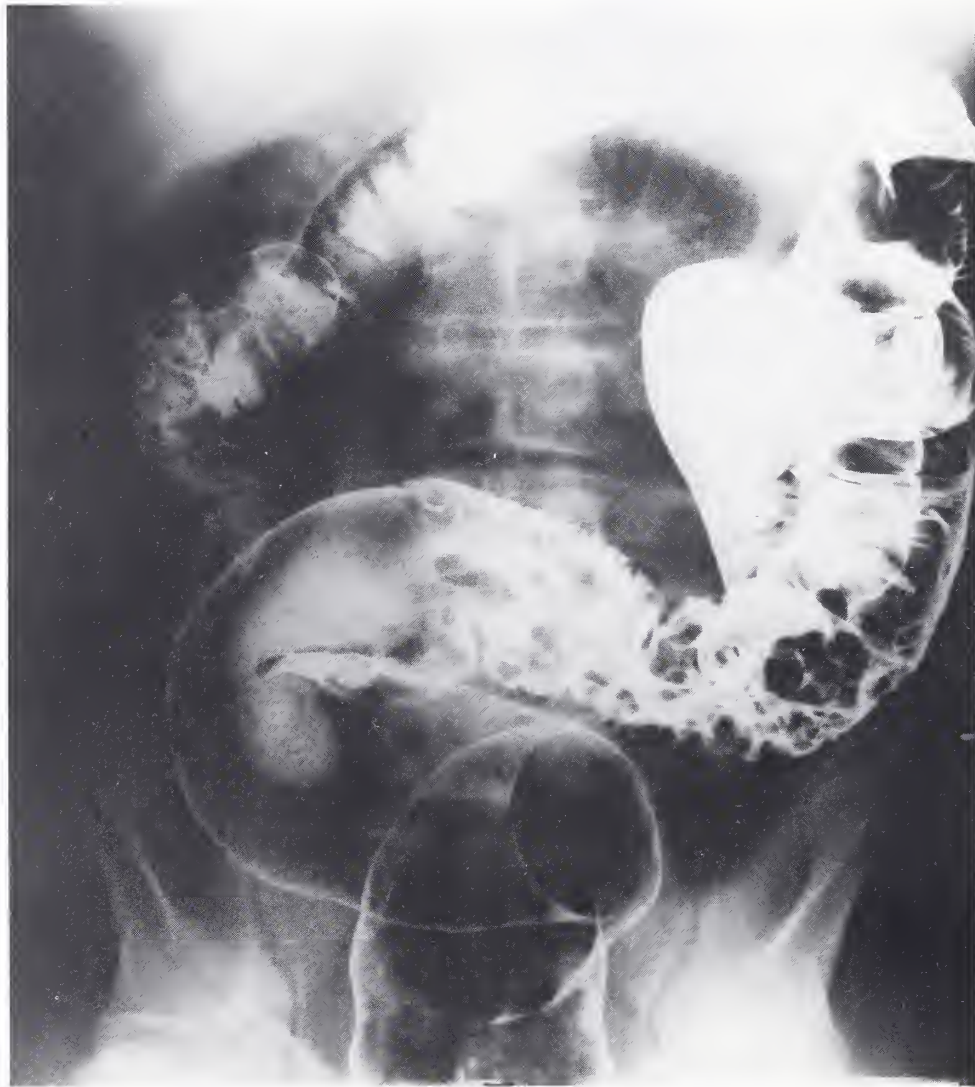


Figure 1. Double-contrast AP film of the colon.

Radiographic Findings

Figure 1 shows an isolated area of the sigmoid colon, which is abnormal. There are numerous smoothly rounded projections into the bowel lumen of fairly uniform size. The epicenter of each

mass lies within the bowel wall, indicating a mural process. The mucosa is involved secondarily but is intrinsically normal. No ulcerations are evident, and this portion of the colon is very distensible.

Familial polyposis is inherited as a Mendelian dominant trait and results in diffuse involvement of the colon with adenomatous polyps at an early age (childhood or early adolescence). The

From the Department of Radiology, University of Tennessee Center for the Health Sciences, 865 Jefferson Ave., Memphis, TN 38163.

usual outcome, if untreated, is carcinomatous degeneration resulting in death, usually by age 45.^{1(pp1056-1057)} The only accepted treatment is total colectomy. The isolated involvement of the sigmoid colon and the patient's age make this diagnosis unlikely.

Granulomatous colitis may involve isolated segments of the colon. The "cobblestone" appearance is a result of transverse and longitudinal ulcerations and fissures. Other findings include fistulas or sinus tracts, abscesses, and lumen narrowing or strictures. Similarly, infiltration of the mucosa with adenocarcinoma creates lumen narrowing and irregular nodularity. The undulating but smooth, non-ulcerated mucosa in this patient and the distensibility of the involved segment exclude these diagnoses.

Colitis cystica profunda is an inflammatory disorder of young adults who present with rectal symptoms, intermittent diarrhea, and passage of bright red blood and mucus.^{2(p45),3} Colon involvement may be diffuse, but the localized form is limited to the rectum.^{1(pp910-912),4} This disease consists of submucosal, mucin-containing cysts lined by colonic epithelium. Although the etiology is unknown, it may be related to a healing phase of ulcerative colitis.⁵ Considering age, distribution, and lack of symptoms, this diagnosis is also unlikely.

The most pertinent radiographic finding is the air density within these mural "lesions," best seen around the periphery (Fig. 2). This makes pneumatosis cystoides intestinalis the best diagnosis in this asymptomatic patient.

Discussion

Pneumatosis cystoides intestinalis (PCI) can be seen in any part of the GI tract. Intramural air in the small bowel and stomach often assumes a linear configuration, whereas the cystic form is most often seen in the colon. Linear intramural gas is associated with more serious disorders such as bowel ischemia or necrosis, infection, or complete obstruction due to carcinoma or volvulus. The cystic form is usually benign and may be secondary to chronic obstructive pulmonary disease or pneumomediastinum. In the latter, air dissects down the mediastinum and into the retroperitoneum, where it then passes along the mesentery and into the bowel wall, forming subserosal cysts. Similarly, air may dissect into the subserosa proximal to a chronic partial obstruction (i.e., duodenal stricture due to peptic ulcer disease) and dissect more distally.^{2(pp42-52)} PCI may also follow

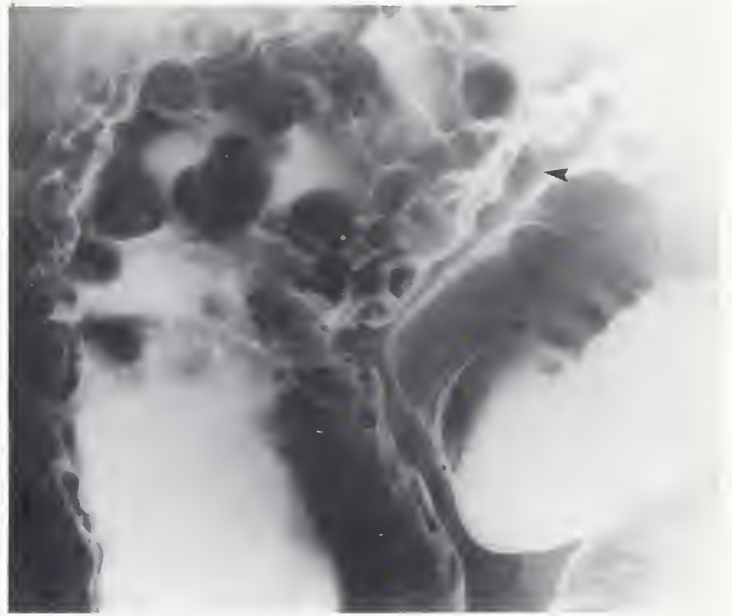


Figure 2. Spot film of the sigmoid colon. Notice the air lucencies contained within the polypoid defects (arrowhead).

gastrointestinal endoscopy or surgery. Scleroderma, necrotizing enterocolitis, and steroid therapy in children have also been implicated. Lastly, PCI may be idiopathic.⁶

The subserosal air cysts of PCI may be quite large and may rupture, causing pneumoperitoneum. In contrast to a perforated viscus, these patients are usually asymptomatic, and the pneumoperitoneum may persist indefinitely.^{2(pp42-52)}

Identification of PCI is important, since it represents a benign condition and requires no treatment. Confusion with other entities might lead to unnecessary surgery. Associated underlying conditions may be present, but many cases are idiopathic and resolve spontaneously. In this particular case, PCI is an incidental finding and requires no further workup.

DIAGNOSIS: (2) Pneumatosis cystoides intestinalis.

REFERENCES

1. Margulis AR, Burhenne HJ: *Alimentary Tract Roentgenology*. St. Louis, C.V. Mosby Company, 1973.
2. Nelson SW, Freimavia AK, Wiot JW, et al: *Gastrointestinal Tract Disease Syllabus*. Chicago, American College of Radiology, 1973.
3. Beneventano TC, Clements JL, Dodd GD, et al: *Gastrointestinal Disease Syllabus* (third series). Chicago, American College of Radiology, 1981, pp 194-205.
4. Marshak RH, Linden AE, Maklousky D: *Radiology of the Colon*. Philadelphia, W. B. Saunders Company, 1980, pp 386-400, 737-741.
5. Dreyfuss JR, Janover ML: *Radiology of the Colon*. Baltimore, Williams & Wilkins Co, 1980, pp 546-556.
6. Juhl JH: *Essentials of Roentgen Interpretation*, ed 4. Philadelphia, Harper & Row, 1981, pp 471-472.

Update: Tuberculosis in Tennessee

H. R. ANDERSON, M.D.

In the September, 1978, issue of the *Journal of Tennessee Medical Association*, a report from the Division of Tuberculosis Control commented on activities of the Division, including closure of the last of the four state-owned and operated tuberculosis and chest disease hospitals, on June 30, 1978. Included was information concerning public health services for tuberculosis patients with a list of clinic sites, hours of operation, and the names and telephone numbers of tuberculosis control physicians providing care in the various regional and metropolitan health departments statewide.

The present communication gives an interval report and an updated listing of sites where services can be obtained, with the names and telephone numbers of key personnel who can be called for consultation and/or see that services are provided for tuberculosis patients.

In 1981, 778 cases of tuberculosis were reported in Tennessee, 13 less than in 1980. Except for 1980, this is a continuation of a decline in the number of reported cases each year since 1975, when new criteria were adopted for the reporting. The total number in 1975 was 1,033. *The 778 new cases reported in 1981 represents a 24.6% decrease since 1975*, an average annual reduction rate of 5.1%. Seventy-four percent of the total occurred in the white population, but the case rate for whites was less than one-half the rate for other races. While 59% were male, persons over 45 years of age accounted for 80% of the reported cases; 13.4% of the lesions were extrapulmonary.

The provisional number of deaths attributed to tuberculosis in 1981 was 60. This is a 59% decrease in the death rate over a ten-year period. Tuberculosis continues to be a major though decreasing public health problem in Tennessee. The Department's change from a primarily hospital-based to a largely outpatient program for treatment of tuberculosis has to date proved to be appropriate, cost effective, and successful.

In recent years, significant numbers of refugees from Southeast Asia and Cuba have moved to Tennessee. They and the many foreign-born students from "underdeveloped nations" attending colleges and universities in our state come from countries with a much higher tuberculosis morbidity than Tennessee now has. Since these individuals are at an increased risk of having or for developing infectious tuberculosis, they require evaluation and increased surveillance. Significant numbers attend our clinics where therapy or chemoprophylaxis, as indicated, is provided.

The Division continues to provide inpatient care, when necessary, by contract with selected general hospitals, and to operate directly or in conjunction with the outpatient tuberculosis clinics of the metropolitan health departments. Services are provided regularly at four metropolitan city-county and eight state regional sites. At each of these, a chest physician, professional nursing staff, paramedical, and clerical personnel serve the patients. The clinics provide antituberculosis drugs, chest x-rays, physical examinations, tuberculin skin tests, sputum examinations, and biochemical blood studies to monitor the patients. Each clinic has a tuberculosis case register to aid the staff in surveillance of the cases and their contacts.

Clinic sites, hours of operation and clinicians in charge are listed in Table 1.

From the Tennessee Department of Public Health, R. S. Gass State Office Bldg., Ben Allen Road, Nashville, TN 37216. Dr. Anderson is medical director of the Tuberculosis and Chronic Disease Section of TDPH.

TABLE 1

REGIONAL AND METROPOLITAN TUBERCULOSIS CLINICS IN TENNESSEE

Clinic Site	Clinic Hours and Physician in Charge	Associated County Health Departments
Region 1-First TN 1233 Southwest Avenue Extension Johnson City, TN 37601 Tel. (615) 928-8301	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Tuesday 9:00 a.m.-11:00 a.m. and Thursday 1:00 p.m.-3:00 p.m. T. B. Physician: Jay Mehta, M.D.	Hancock, Hawkins, Greene, Sullivan, Carter, Washington, Unicoi and Johnson.
Region 2-East TN 1522 Cherokee Trail Knoxville, TN 37920 Tel. (615) 546-9221	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Thursday 9:00 a.m.-12 noon T. B. Physician: Alfred D. Beasley, M.D.	Scott, Campbell, Claiborne, Morgan, Anderson, Union, Grainger, Hamblen, Knox, Jefferson, Roane, Loudon, Blount Sevier, Cocke, Monroe.
Knox Co. Health Department Cleveland Place, NW Knoxville, TN 37917 Tel. (615) 521-2237, Ext. 3687	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Tuesday 9:00 a.m.-12 noon and Thursday 9:00 a.m.-12 noon T. B. Physician: Milbrey Hinrichs, M.D.	Four outlying clinics in Knox County
Region 3-Southeast TN 2501 Milne Avenue Chattanooga, TN 37406 Tel. (615) 624-9921	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present on Monday, Wednesday, and Thursday 8:00 a.m.-2:30 p.m. T. B. Physician: W. B. Henry, M.D.	Bledsoe, Rhea, Grundy, Sequatchie, Meigs, McMinn, Marion, Polk, Hamilton, Bradley
Chattanooga-Hamilton Co. Health Department, 921 East Third Street Chattanooga, TN 37403 Tel. (615) 757-2100	Monday: 10:00 a.m.-6:00 p.m. Tuesday thru Friday: 8:00 a.m.-4:00 p.m. M.D. present Friday 8:30 a.m.-12:00 noon T. B. Physician: W. B. Henry, M.D.	Several outlying clinics in Hamilton County
Region 4-Upper Cumberland P. O. Box 5033-TTU Cookeville, TN 38501 Tel. (615) 528-7531, Ext. 222	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Monday 1:00 p.m.-4:00 p.m. and Tuesday 8:00 a.m.-12 noon T. B. Physician: H. R. Anderson, M.D.	Macon, Clay, Pickett, Jackson, Overton, Smith, Fentress, Putnam, DeKalb, White, Cumberland, Cannon, Warren, Van Buren
Region 5-Mid-Cumberland, TDPH R. S. Gass State Office Bldg. Ben Allen Road Nashville, TN 37216 Tel. (615) 741-7333	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Thursday 8:00 a.m.-12 noon and by appointment on other days. T. B. Physician: John Woods, M.D.	Stewart, Montgomery, Robertson, Sumner, Houston, Humphreys, Dickson, Cheatham, Davidson, Wilson, Williamson, Rutherford
Metro-Nashville Davidson Co. Lentz Health Center 311-23rd Avenue North Nashville, TN 37203 Tel. (615) 327-9313	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Tuesday and Wednesday 1:00 p.m.-4:30 p.m., and Thursday 8:00 a.m.- 12:00 noon T. B. Physician: Robert Quinn, M.D.	Several outlying clinics in Davidson County
Region 6-South Central 1216 Mt. Pleasant Columbia, TN 38401 Tel. (615) 381-3661	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Wednesday 8:00 a.m.-2:00 p.m. T.B. Physician: John Woods, M.D.	Perry, Hickman, Maury, Marshall, Bedford, Coffee, Lewis, Wayne, Lawrence, Giles, Lincoln, Moore
Region 7-Northwest P. O. Box 190 Union City, TN 38261 Tel. (901) 885-7700	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Tuesday 1:00 p.m.-4:30 p.m., and Wednesday 8:00 a.m.-11:00 a.m. the 2nd and 4th week of each month T.B. Physician: John Larkin, M.D.	Lake, Obion, Henry, Weakley, Dyer, Gibson, Carroll, Benton, Crockett
Region 8-Southwest 295 Summar Avenue Jackson, TN 38301 Tel. (901) 424-9200	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present each Monday 9:00 a.m.-3:30 p.m., and the 2nd and 4th Tuesday of each month from 8:00 a.m.-9:30 a.m. T. B. Physician: John Larkin, M.D.	Haywood, Madison, Decatur, Henderson, Hardeman, McNairy, Hardin, Chester
Memphis-Shelby County Health Department 814 Jefferson Avenue Memphis, TN 38105 Tel. (901) 528-3793	Monday thru Friday: 8:00 a.m.-4:30 p.m. M.D. present Monday thru Friday 9:30 a.m.-3:00 p.m. T. B. Physician: William G. White, M.D.	Several outlying clinics in Shelby County



EKG of the Month

W. BARTON CAMPBELL, M.D.

A 61-year-old man was admitted to St. Thomas Hospital with hematemesis and melena. Nine years prior to admission cardiac catheterization revealed severe aortic insufficiency. Seven and one half years prior to admission an aortic valve replacement was carried out and he was subsequently kept on warfarin therapy. A brief episode of atrial fibrillation occurred following surgery. An ambulatory 24-hour electrocardiographic recording showed occasional premature ventricular contractions with couplets.

Six years prior to admission an α -hemolytic streptococcal endocarditis occurred after a dental procedure in spite of appropriate cephalosporin coverage. A history of penicillin hypersensitivity characterized by periorbital edema was elicited but his skin test was negative and he was eventually treated with aqueous penicillin for six weeks with defervescence. He has been maintained on oral penicillin subsequently.

Two years prior to admission he was admitted elsewhere for a brief arrhythmia interpreted as ventricular tachycardia. He was subsequently maintained on quinidine gluconate, 648 mg orally four times daily.

Eight hours prior to this admission he became acutely nauseated and began to have black tarry diarrhea with "coffee ground" emesis. He did not have abdominal pain. He had

no antecedent history of acid peptic disease.

At the time of admission he appeared pale. Blood pressure was 162/74 supine with a pulse of 72/min. Standing blood pressure was 108/60 with a pulse of 90/min. There was no abdominal tenderness. His hematocrit was 34%, the prothrombin time was 22 seconds with a control of 10 seconds and the platelet count was normal. Endoscopy was carried out and he was found to have a large bleeding duodenal ulcer. Admission electrocardiogram is shown (Fig. 1).

He was taken to the operating room where duodenotomy with oversewing of the duodenal ulcer and a proximal gastric vagotomy were performed without incident. He had occasional premature ventricular contractions following surgery and was placed on intravenous lidocaine with resulting blood level of 3.6 $\mu\text{g/ml}$ (therapeutic level 1.2 to 5 $\mu\text{g/ml}$). The potassium was 4.5 mEq/liter.

On the fifth hospital day an abrupt change in the electrocardiogram occurred (Fig. 2). Systolic blood pressure was 95 mm Hg. No cannon a waves could be observed in the jugular venous pulses. Auscultation disclosed no variation in the intensity of the first heart sound. Carotid sinus massage produced no change in this dysrhythmia. The grade I Starr-Edwards prosthetic aortic valve flow murmur was not significantly changed.

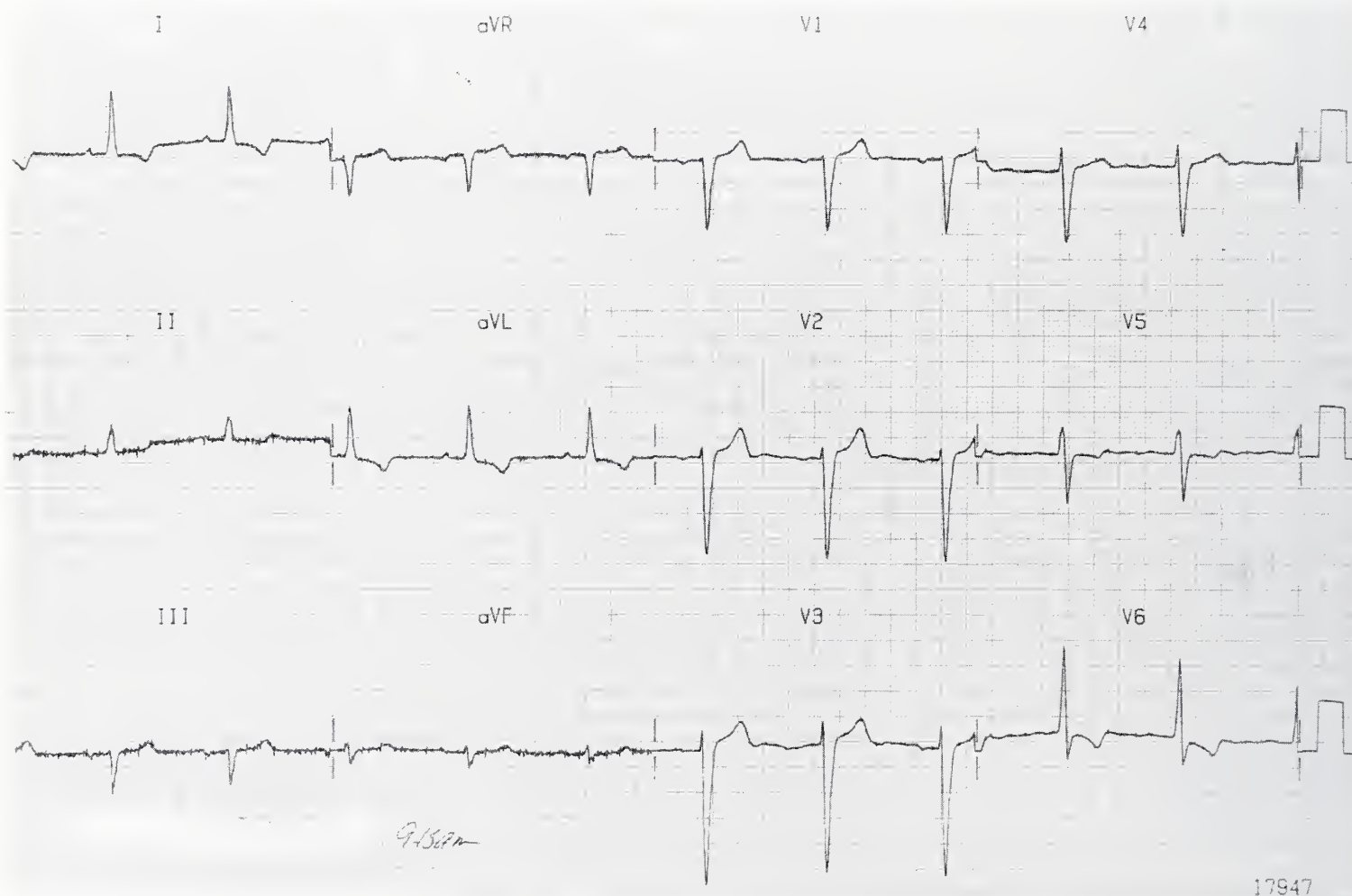


Figure 1

From the Department of Cardiology, St. Thomas Hospital, Box 380, Nashville, TN 37202.

Discussion

Figure 1 discloses sinus rhythm at a rate of 64/min. The PR interval is normal at 0.18 seconds. Irregularities in the baseline, especially in leads II, III and aVF suggest increased skeletal muscle depolarization. The P waves are inverted in V_1 and V_2 . The QRS complex is widened at 0.11 seconds. The intrinsicoid deflection in the lateral precordial leads is delayed at 0.07 seconds. The QRS voltage is not markedly increased (maximum S wave of 25 mm in V_3 and R wave in V_6 of 15 mm). Left axis deviation is not present (axis approximately 10° to 20°). There is prominent T inversion in I, aVL and V_6 .

Left ventricular enlargement is present by the point score system of Romhilt and Estes¹ (Table 1).

Scoring:

ST segment vector opposite to the mean QRS vector (without digitalis)	3
Abnormal P terminal force in V_1	3
QRS duration greater than 0.09 seconds	1
Intrinsicoid deflection in lead V_5 or V_6 greater than 0.05 seconds	1
Total	8

Figure 2 displays a striking change in QRS morphology. P waves are not identified in this

TABLE 1

ROMHILT-ESTES POINT SCORE SYSTEM¹

	Points
1. Amplitude of the QRS complex positive if any one of the following is present:	
A. Largest R or S in limb leads greater than 20 mm.	
B. SV_1 or SV_2 greater than 30 mm.	
C. RV_5 or RV_6 greater than 30 mm.	3
2. ST-T segment positive if a left ventricular strain pattern with an ST-T vector opposite to the mean QRS vector is present:	
Without digitalis	3
With digitalis	1
3. Left atrial enlargement positive if terminal P force in lead V_1 is abnormal.	3
4. Abnormal left axis deviation positive if the left axis of the QRS complex is leftward and superior at 330° .	2
5. QRS duration greater or equal to 0.09 seconds (QRS duration must be less than 0.12 seconds in order to exclude bundle branch block).	1
6. Intrinsicoid deflection positive if the intrinsicoid deflection in lead V_5 or V_6 is greater or equal to 0.05 seconds.	1
"Probable" left ventricular enlargement is present if four points are present.	
Left ventricular enlargement is diagnosed if five or more points are present.	

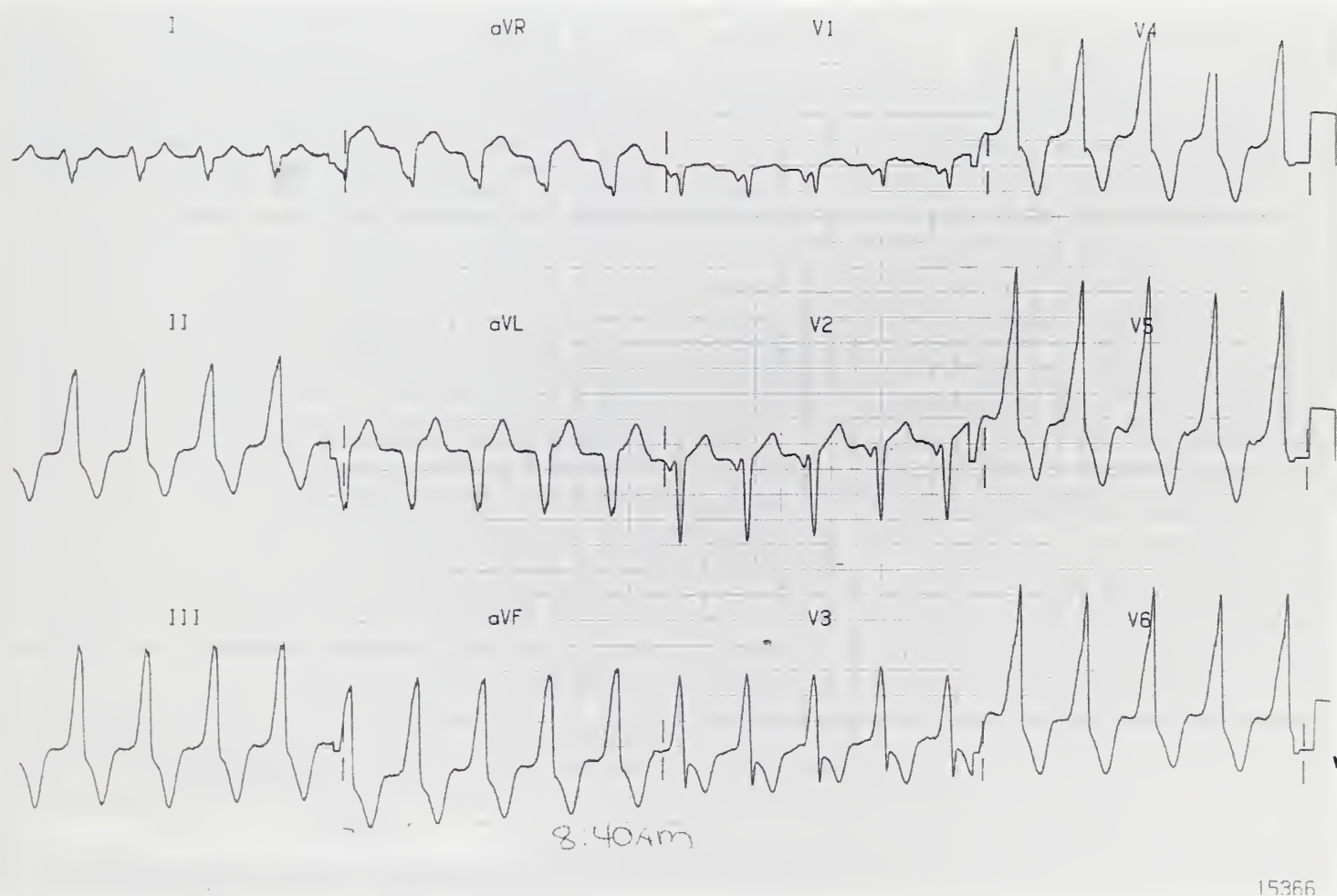


Figure 2

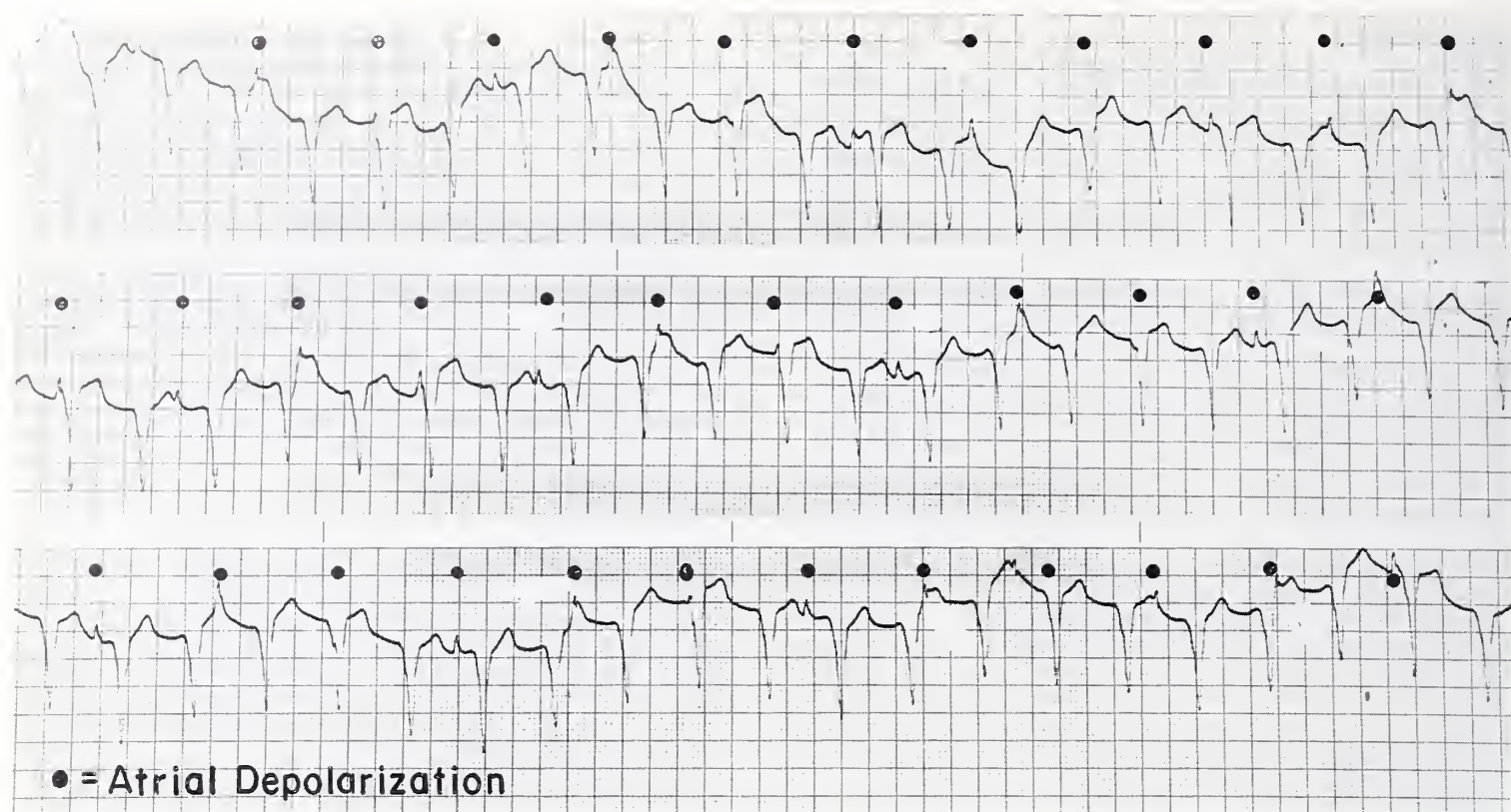


Figure 3

tracing. The rate is regular at 113/min. The QRS duration is 0.17 seconds. A right bundle branch block configuration is noted in the limb leads without anterior forces in V_1 and V_2 . The T waves are deeply inverted in II, III, aVF and in the lateral precordial leads.

Documentation of ventricular tachycardia usually depends upon demonstration of atrioventricular (AV) dissociation. Irregular cannon a waves or a variation in the intensity of the first heart sound would suggest AV dissociation. The absence of these findings is of no help in differentiating between an aberrated supraventricular process or ventricular tachycardia. Use of varying surface leads disclosed no evidence of atrial depolarization.

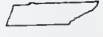
In order to visualize atrial depolarization, a bipolar esophageal lead was passed and connected to right and left arm leads while recording from lead I. A tracing was obtained (Fig. 3).

Figure 3 shows three continuous rhythm strips obtained from the esophageal lead. Atrial depolarization is identified on these rhythm strips with a regular rate of 67/min. There is no association between ventricular depolarization and atrial depolarization. The esophageal lead documents the presence of ventricular tachycardia.

The ventricular tachycardia ceased spontaneously (just prior to electrocardioversion) after approximately 20 minutes. Cardiac output ap-

peared well maintained with this ventricular tachycardia. The patient was subsequently treated with intravenous procainamide, resulting in procainamide levels of 4 $\mu\text{g/ml}$ (therapeutic level 4 to 8 $\mu\text{g/ml}$), and N-acetyl procainamide levels of 3.1 $\mu\text{g/ml}$. He was later changed to quinidine gluconate, 324 mg every six hours. This resulted in a quinidine blood level of 3.3 $\mu\text{g/ml}$ (therapeutic 2.3 to 5.0 $\mu\text{g/ml}$). No further ventricular ectopy was noted on quinidine therapy.

The diagnosis of wide complex tachycardia is often difficult and may depend on additional procedures to demonstrate AV dissociation. In the presence of ventriculo-atrial capture AV dissociation is absent and His bundle electrocardiograms are the only reliable way to separate aberrated supraventricular tachycardia and ventricular tachycardia. Wellens et al² have observed that a QRS complex in excess of 0.14 seconds duration commonly implies ventricular origin. The morphology of the tachycardia has been unreliable in differentiating between a ventricular and supraventricular source.

FINAL DIAGNOSIS: (1) Left ventricular enlargement, (2) ventricular tachycardia. 

REFERENCES

1. Romhilt DW, Estes EH Jr: A point score system for the electrocardiographic diagnosis of left ventricular hypertrophy. *Am Heart J* 75:752, 1968.
2. Wellens HJJ, Frits WHM, Lie KI: The value of the electrocardiogram in the differential diagnosis of a tachycardia with a widened QRS complex. *Am J Med* 64:27, 1978.



GEORGE W. HOLCOMB, JR.

Once Again December

It is December once again. The busyness of fall has gone all too quickly and winter is upon us to slow our step and quieten our lives.

Our politics have been decided for awhile. For a short time even our economic woes take second billing to gift giving and the warmth of anticipated reunions with family and friends during the holidays. It is the season of Christmas and Hanukkah—a special time of traditions, reflections, reassessment and resolves.

In this spirit, I would like to share the thoughts expressed in poetry by Robert H. Schauffler.¹

George Holcomb Jr MD

Ring out the old, ring in the new,
Ring, happy bells, across the snow;
The year is going, let him go;
Ring out the false, ring in the true.

Ring out the grief that saps the mind,
For those that here we see no more;
Ring out the feud of rich and poor,
Ring in redress to all mankind.

Ring out a slowly dying cause,
And ancient forms of party strife;
Ring in the nobler modes of life,
With sweeter manners, purer laws.

Ring out the want, the care, the sin,
The faithless coldness of the times;
Ring out, ring out my mournful rhymes,
But ring the fuller minstrel in.

Ring out false pride in place and blood,
The civic slander and the spite;
Ring in the love of truth and right,
Ring in the common love of good.

Ring out old shapes of foul disease;
Ring out the narrowing lust of gold;
Ring out the thousand wars of old,
Ring in the thousand years of peace.

Ring in the valiant man and free,
The larger heart, the kindlier hand;
Ring out the darkness of the land,
Ring in the Christ that is to be.

—Robert H. Schauffler

1. Schauffler RH (ed): *Christmas*. New York, Dodd Mead & Co., 1965, p xii.

Journal of the tennessee medical association

PUBLISHED MONTHLY

DEVOTED TO THE INTERESTS OF THE MEDICAL
PROFESSION OF TENNESSEE

OFFICE OF PUBLICATION: 112 LOUISE AVENUE,
NASHVILLE, TN 37203

JOHN B. THOMISON, M.D., EDITOR

ADDISON B. SCOVILLE, JR., M.D., ASSOCIATE EDITOR

JEAN WISHNICK, MANAGING EDITOR

Acceptance for mailing at special rate of postage
provided for in Section 1103, Act of October 3, 1917,
authorized July 15, 1932

Copyright for protection against republication. Journals
of the American Medical Association and of other
state medical associations may feel free to quote
from this Journal whenever they desire
merely giving credit to this publication

Address papers, discussions and scientific matter to
John B. Thomison, M.D., Editor, P.O. Box 70,
Nashville, TN 37202

Address organizational matters to L. Hadley Williams,
Executive Dir., 112 Louise Avenue, Nashville, TN 37203

COMMITTEE ON SCIENTIFIC AFFAIRS

OSCAR M. McCALLUM, M.D., Chairman, Henderson
GEORGE W. SHANNON, M.D., Jackson
CLAUDE H. CROCKETT, JR., M.D., Bristol
H. VERDAIN BARNES, M.D., Chattanooga
FRANCIS W. GLUCK, JR., M.D., Nashville
JOHN B. THOMISON, M.D., Nashville, Ex-Officio

DECEMBER, 1982

editorials

Shalom

"Keep Christmas in your own way, and let
me keep it in mine."

"Keep it!" repeated Scrooge's nephew.

"But you don't keep it!"

"Let me leave it alone, then," said Scrooge.

—Charles Dickens
A Christmas Carol

The other day in thumbing through the file I
keep on various things, among them Christmas,
I happened onto an article by D. Keith Mano

entitled "Humbug," torn from a *National Review* of about ten years ago. "Christmas is a diseased thing," he wrote. "It stinks of vulgarity and waste: as if the Three Wisemen had brought Jesus a whoopee cushion . . . and for His dog in the manger a disposable plastic pooper scooper. . . . And, God forgive us, it's American. By our gifts we are known." He goes on to say that uselessness has class, that cynicism is driven deep into the mail order catalogs, and, "It's easier to receive than to give. Christmas mugs us, a straight razor against the throat. . . . Christmas is joyless, obligatory: a 1040 form for the soul."

All in all, it is a dreary recitation of bleak reality. What was true ten years ago is with us yet, with compound interest. The economy is worse, and so the catalogs come on with a harder sell, their collective voice more shrill. Everyone is out to get one or more of your hard-earned, depreciated bucks in whatever way possible, preferably by selling you one of those useless items labeled "for the man who has everything." At Christmas one is obliged, it seems, to give gifts to those about whom he cares so little he does not know whether they have everything or not; and so those things sell.

Christmas is a burlesque.

On the first Christmas three Oriental princes rode for weeks across the burning desert to take gifts to the one they recognized as their King. They took the most precious things they had—gold, frankincense, and myrrh. It stood the newborn kings in good stead in His forced exile in Egypt. You wouldn't know, to look at the catalogs, beginning about the Fourth of July, or at the stores, beginning about Labor Day, that this was the origin—or anyway, one of them—of gift giving at Christmas.

Though their reasons were widely divergent, Scrooge was in good company in not observing Christmas. Our Puritan forebearers refused to celebrate a modernized Saturnalia; thus it has come down to us, mixed with a dash of snake oil and good old all-American hucksterism thrown in.

It is well to remember, not only at Christmas-time, but at every other season as well, that Christ was not born on a cathedral altar between two candles, but in a dank cave, and He was placed not in a little bed but in a manger, which even though it has become romanticized in our thinking, was nothing more than a feed-trough for cattle. Perhaps the harder times this year will help us remember. If they do, they may be worth it.

So keep Christmas in any way you wish, or leave it alone. But I say, God save you from all the gimmicks, and from Bethlehem-gone-urban. "Christmas is joyless, obligatory. . . . I say to hell with it," says Mr. Mano. Since that is where that particular brand of observance of the season hails from, that imprecation is scarcely necessary. But it need not be so.

Christmas is for family and friends; it is a time for loving memories and for founding future ones. It is a time for satisfying the needs of others, and not for gratifying the whims of hucksters. It is not Christmas that is a diseased thing, but the "Holidays" it has become. It is the "Happy Holidays" that stink of vulgarity and waste; it is the (not so) Happy Holidays that are born in Hell. Even with the Holiday Season blaring at you from all sides, Christmas, being within you, is still what *you* make it.

Mr. Mano closes his piece by saying, "I wish for you only a peace-filled, happy few moments—the birth remembered of my Savior. And yours."

To which I can only say, Amen, and Amen.

J.B.T.

Health Care Costs, Or, The Sheep-Clad Wolf

When I entered Vanderbilt in 1938 as a college freshman, war clouds were gathering on the horizon, and a year or so later Europe was in the process of being overrun by Hitler's not-so-mercy men. By the time I started medical school in 1941 it appeared the United States was about to become embroiled in the fracas, and we very shortly were. After an absence from Vanderbilt of five years, give or take a few months, which included some military service and a couple of years of surgical training, I returned to Vanderbilt to begin my Pathology residency. That was 1949. The war that was to have ended all wars didn't, and the United States was soon fighting a "police action" in Korea. There was a shortage of doctors and money, which was still plaguing the school when I ended my tenure as a full-time faculty member in 1966. There was not, however, a shortage of administrators then, nor is there now. The numbers, though, are vastly different.

The Dean's office in 1941 doubled as the office of the Department of Preventive Medicine, or perhaps it was more correctly the other way around. The fiscal operation of both the medical school and hospital occupied a couple of rooms on the first floor, and was run by a comptroller with the help of a few clerks with ledger books and adding machines. The only difference when I returned was that the Dean's office had just shifted—temporarily, it was hoped all around—to the Pathology Department. It actually stayed there for several years, during what were financially the school's most trying times. What bailed it out was research grants and capitation—federal money. It was the kiss of death.

Whoever has charge of the purse strings calls the shots—in any context. Having begun to foot the bills, the government set about taking its present proprietary interest in medicine; this escalated a few years later with the Medicare Act. Since the senators and congressmen did not understand all of the intricacies of the medical system, they hired "experts" who did—or said they did. It was they who proposed the legislation and wrote the regulations to right the wrongs they perceived in the system.

The first premise of those regulation writers was that the system, as well as all those in it, was basically dishonest. This stems largely from the fact that the regulation writers, et al, were (are) mostly lawyers, and lawyers assume that *everyone* is dishonest—it is just that some are more dishonest than others. Since lawyers are remunerated on a contingency basis, the presumption is perhaps understandable. The contingency system would be translated into medical terms like this: The doctor says to the patient, "If you die or fail to thrive, you owe me nothing. If, however, you recover, since I gave you life, I will have a lien on your entire net worth for the rest of your life—say 30%." Now the lawyers would consider that immoral and unethical. So do I—in both of us.

Operating from that base, the lawyers began to write regulations. With every new regulation came two dozen new forms to fill out. Now, when I was a student, even though there was much less we could do for a patient than there is now (we could not do as much *to* him, either), it was surprising how well most of them got along, even without SMAC LXIX, CAT, NMR, ETC. Lacking a lot of our present advantages, not as much could happen to them either; still, even without TV, 747s and so on, the standard of living was

pretty high, and the poor were/are no poorer and the rich no richer than now/then. This is not one of the assumptions of the regulation writers, though, as they always look for—and therefore find—the worst—both then and now.

The work of the regulation writers is to write regulations, and write them they did, and do. Prominent among their scribblings are those that will assure perpetuation of their own employment, and also add a few (lots of) jobs for a few (lots) of their friends. This does, in fact, produce jobs for their ilk both within and outside of the bureaucracy, since for every regulation writer there must be an infinite number of regulation compliance reporters—at least one—or more often many—in every institution. After all, someone must fill out their forms. The filled out forms then go back to the bureaucracy for analysis, so there must be for every complier an infinite number of analysts. Now we have computers, also, which require computer technologists and programmers, too, and someone to read the printouts—not to mention cutting the trees and planting new ones for all that paper.

Only God (and *perhaps*—I doubt it, but perhaps) the personnel director at Vanderbilt Medical Center know how many highly paid (and maybe, just maybe, a few lowly-paid) individuals, with their computers, have replaced those dedicated few who, with their adding machines, inhabited those two or three rooms 40 years ago. (It is now a *center* instead of a school and hospital, considering it—not the University, but it—is the third largest employer in Nashville, thanks in no small measure to the reg-writers.)

We have come a long way. We have come to a point, after a very few generations of medical research, where we are on the verge of being able to make every individual body immortal. But—hold it!

The planners have now discovered that it will be too expensive to do this for everybody, and so they are busy working out a system for deciding who will be the recipients of this largesse, and who will be allowed to drop dead or rot. To be more precise, they are working out a system for *us* to decide. It is, after all, politically inexpedient for them to do so.

Now *why* is medical care too expensive? I will tell you why, in two short (or maybe not so short) statements. First, if what we do does not work, or if what we decide is unpopular, we get sued. We get sued not because the patients thought of it, usually, but because of the contingency sys-

tem, which says, “Get yours! (Then *I’ll* get most of yours!)” Second, whether what we do does or does not work, the forms must be filled out and analyzed. While what we do may not cost very much, all that paper work does.

Immortality may or may not be just around the corner for some or every body, but what we can do *for* people is running a very poor second to what others can do *to* them, both physically and otherwise, and medical care is not nearly so expensive as its by-products. Then, too, most legislators are lawyers, and they have the last word. Maybe not being immortal in such a system ain’t so bad of a deal after all, considering everyone will soon be, if we are not already, either regulation writers, compliance reporters, compliance enforcers, or compliance analysts. The compliers (that’s us) will soon as phased out.

J.B.T.

Gift

Early on a day last week the sky low down
Turned blood, while higher up an azure blue
Went amethyst. Light grew
Apace. A tree-lined road
To frame a patch of open sky—naught else
Came into view.

Around a bend a vision lurked
That would have slowed my pace
Had I but known.
But rushing on in modern car, I caught
A fleeting glimpse—no more—
Of crescent moon—
Not crescent—no—
A silver ring about a darkened sphere.

The vision gone, the chance was lost
To savor yet another jot
Or tittle of the graciousness
Nature yet bestows on man.

How rushed we are!
We seek her gold, and when it comes,
Alas, we find just dross remains.
Our cares prevail; man seems condemned
To seek, and seek again, her gifts—
And seek in vain.

J.B.T.



Blighted Pregnancy at Age 54

To the Editor:

I am reporting the following case to alert practicing physicians to the possibility that pregnancy, with all its peculiarities, may need to be included in the list of differential diagnoses for diseases of the abdomen in women over 50.

My patient is a 54-year-old schoolteacher who menstruated regularly until six months before her admission to the hospital. Menses then ceased, she began to experience nausea and breast enlargement, and later, when her lower abdomen began to enlarge and some bleeding occurred, she came to the Woman's Clinic to see if she were pregnant. She had never before been pregnant. She had been receiving treatment for one year from an internist for arrhythmia and gallstones with isosorbide dinitrate (Isordil), propranolol hydrochloride (Inderal) and a low-fat diet. On examination she was found to have a multinodular uterus which was enlarged to the size of a four-month pregnancy. To reassure the teacher that she was not pregnant a Gravindex test for pregnancy was done, but this was positive. An ultrasonogram was obtained, and though it looked like a hydatid mole, because of her age the sonogram was interpreted as "probably a degenerated myoma." After admission to the hospital a quantitative HCG serum test was done, which revealed "a very high titer of chorionic gonadotropin present." In the operating room a D & C revealed typical hydatid cysts, and a hysterectomy was then carried out. The pathology report showed a 530-gm myomatous uterus with a benign hydatid mole.

Prior to this case the oldest pregnant patient I had ever seen was a 48-year-old woman with 11 children previously. However, a reliable doctor on our staff reported that his mother-in-law had given birth at age 50. If any reader can authenticate other pregnancies at age 50 or beyond, our editor and I would be interested in hearing from him.

Swan Burrus, Jr., M.D.
Woman's Clinic
512 Roland Ave.
Jackson, TN 38301



Robert Gaylord Brown, age 59. Died September 29, 1982. Graduate of Jefferson Medical College. Member of Greene County Medical Society.

Robert E. Eyssen, age 67. Died July 29, 1982. Graduate of McGill University Faculty of Medicine. Member of Chattanooga-Hamilton County Medical Society.

new members

The JOURNAL takes this opportunity to welcome these new members to the Tennessee Medical Association.

FRANKLIN COUNTY MEDICAL SOCIETY

Harry Alex Jones, M.D., Winchester

GREENE COUNTY MEDICAL SOCIETY

John N. Norris, M.D., Greeneville

KNOXVILLE ACADEMY OF MEDICINE

Larry D. Hudson, M.D., Knoxville

Mitchell L. Mutter, M.D., Knoxville

McMINN COUNTY MEDICAL SOCIETY

Stephen Lemings, M.D., Athens

MEMPHIS-SHELBY COUNTY

MEDICAL SOCIETY

James Harold Beaty, Jr., M.D., Memphis

Mark Allan Castellaw, M.D., Memphis

John D. Crawford, M.D., Collierville

John Spencer Diggs, M.D., Memphis

Richard H. Kisber, M.D., Memphis

Subir K. Nag, M.D., Memphis

Gary Lynn Reynolds, M.D., Memphis

Brixey R. Shelton, M.D., Memphis

NASHVILLE ACADEMY OF MEDICINE

Brian Richard Carlson, M.D., Mt. Juliet

Sidney G. Christiansen, M.D., Nashville

Louis Ernest Cunningham, M.D., Nashville

Thomas Patrick Delaney, M.D., Nashville

Christine Zunich Dickinson, M.D., Nashville

Gary Eliot Fink, M.D., Nashville

James Donald Green, M.D., Nashville

Jeremy Jon Kaye, M.D., Nashville

John F. Kveton, M.D., Nashville

Donald Ray Lovelace, M.D., Nashville

Deborah G. Montgomery, M.D., Nashville

William Harold Pettus, M.D., Brentwood

Andani Siddappa Prakash, M.D., Nashville

Ann Hutcheson Price, M.D., Nashville

Joseph C. Ross, M.D., Nashville

Langdon G. Smith, M.D., Antioch

Brad Allen Steffler, M.D., Nashville

Ramona Nondine Walsh, M.D., Nashville

(Students)

Philip Bradly Anderson, Nashville

Linda Humphreys, Nashville

Joyce Evelyn Johnson, Nashville

Roger Lynn Swingle, Jr., Nashville

PUTNAM COUNTY MEDICAL SOCIETY

Kenny W. Lynn, M.D., Cookeville

ROANE-ANDERSON COUNTY MEDICAL SOCIETY

Adam Ross Nortick, M.D., Wartburg

TMA Members Receive AMA Physician's Recognition Award

Twenty-seven TMA members qualified for the AMA Physician's Recognition Award during September 1982.

To qualify for the PRA, a minimum of 150 hours of continuing medical education must be earned over a three-year period; 60 of these hours must be Category 1.

This list does not include members who reside in other states. Names of additional PRA recipients will be published as they are received from AMA.

John R. Adams, M.D., Memphis
Thomas K. Ballard, M.D., Jackson
Richard L. Bilbrey, M.D., Crossville
Dean E. Brenner, M.D., Nashville
Clifton R. Cleaveland, M.D., Chattanooga
Peter M. Duvoisin, M.D., Chattanooga
John L. Farringer, Jr., M.D., Nashville
Frederick L. Finke, M.D., Nashville
Dennis A. Higdon, M.D., Memphis
Robert P. Hill, M.D., Troy
Dabney James, M.D., Chattanooga
Kerry L. Kline, M.D., Nashville
John H. L. Marshall, M.D., Knoxville
Samuel G. McCaskill, Jr., M.D., Paris
Emmett P. Mobley, Jr., M.D., Paris
Hiram B. Moore, M.D., S. Pittsburg
Philip H. Morrison, M.D., Bristol
Arthur M. Owens, M.D., Dunlap
Esteban J. Palacios, M.D., Dyersburg
Henry P. Pendergrass, M.D., Nashville
Warren C. Ramer, Sr., M.D., Lexington
Warren G. Reed, M.D., Knoxville
Robert N. Reynolds, M.D., Nashville
Jack T. Roberts, Jr., M.D., Knoxville
Jones F. Rutledge, M.D., Lewisburg
Benjamin G. Santos, M.D., Chattanooga
Donald A. Taylor, M.D., Memphis

personal news

Robin Algee, M.D., has been named chief of staff at Parkview Hospital in Dyersburg.

James E. Chapman, M.D., Oak Ridge, has been inducted into the International College of Surgeons.

Thomas F. Frist, Sr., M.D., Nashville, received the Tennessee Hospital Association Distinguished Service Award, recognizing "a career of service, and his contributions to health care in Tennessee."

John B. Lynch, M.D., Nashville, has been elected vice president of the Southern Medical Association.

James S. Rodgers, M.D., has been named chief of staff at Laughlin Memorial Hospital in Greeneville. Other officers elected include *Robert A. Cooper, M.D.,* vice chief of staff; and *David O. Patterson, M.D.,* secretary-treasurer.

Titus A. Taube, M.D., Newport, has been certified as a diplomate of the American Board of Family Practice.

national news

From the AMA's Office in Washington, D.C.

Lame Duck Line-Up

The "lame duck" session of Congress starting Nov. 29 will feature action on legislation to exempt the professions from Federal Trade Commission jurisdiction and on most of the major appropriations bills, including funding for the Health and Human Services Department.

Other major health issues to be resolved when Congress returns include authorizations for the National Institutes of Health and extension of the health planning program.

The FTC showdown was postponed for a number of reasons, including the need for a continuing resolution to keep the federal government operating for the first two months of the fiscal year that began Oct. 1. The resolution was necessary because Congress had approved only two of the 13 big money bills for the current fiscal year. The failure to act more swiftly on the appropriations front was the reason for the extra, or lame duck, session that was forced by President Reagan.

Before hitting the campaign trail for the general elections, the House rejected the administration's proposal for a constitutional amendment requiring a balanced budget. The vote was far short of the necessary two-thirds margin of approval.

Among other hurried votes, the Senate adopted 70-29 a non-binding resolution opposing any "means" test for Medicare patients, knocking down a trial balloon floated by the administration as officials tried to figure out ways to pare Medicare costs next fiscal year.

Congress did approve legislation encouraging states to pass strict laws against drunk driving by giving them more highway funds.

The House approved an authorization to give the National Institutes of Health 11% more money this fiscal year and to add a new Institute of Arthritis. The

Senate must still act.

The controversial health planning program won a lease on life by House adoption of a bill keeping the program going for two years, but cutting funding to a total of \$65 million and restricting federal funding for certificate-of-need to institutions involved with \$1 million or more of new projects. The Senate has not voted on this issue.

Action Postponed on FTC Regulation of Professions

Congress' early October decision to adjourn and postpone until at least the end of November the showdown vote on exemption of the professions from the Federal Trade Commission has given both sides in the controversy time to bolster their drives for votes.

The climate in the lame duck session of Congress will be more relaxed. Lawmakers will be under less political pressure with the elections well behind them. The "lame ducks"—senators and representatives defeated in the general election—will be under no pressure at all.

The postponement was in part due to the belief by congressional leaders that the issue is a political hot potato that the lawmakers would rather not handle until the elections are over.

Since the timing of the House vote was in the hands of the Democratic leadership—which is generally opposed to the anti-FTC drive led by the American Medical Association—there was reason to speculate that the leadership was not confident its forces could prevail in a vote by the full House.

The Senate Republican leadership promised to take up the measure in the "lame duck" session after the Senate Appropriations Committee had approved 13-5 an amendment that would prohibit the FTC from using appropriated funds to take actions against state-regulated professions such as physicians. The amendment was part of a continuing appropriations resolution that finally cleared Congress. Amendment sponsor Sen. James McClure (R-ID) agreed not to press for a Senate vote when assured by leadership the question will be resolved in the special session.

The Senate Commerce Committee earlier this year approved a reauthorization bill for the FTC that included an amendment by Sen. Ted Stevens (R-AK) to exempt the professions. This measure is still pending before the Senate, delayed in part because of the opposition of Committee Chairman Robert Packwood (R-OR) to the Stevens Amendment, which was adopted by a 10-5 committee vote.

The situation in the House originally was for a vote Oct. 1 on a bill reauthorizing the FTC for another year. As approved by the House Commerce Committee, the bill contained no restrictive language on the FTC's jurisdiction, but opponents of the FTC's control over the professions were promised a floor vote on the bill by Reps. Thomas Luken (D-OH) and Gary Lee (R-NY) for a moratorium on FTC's actions against the professions. A slight majority of the House—220 members—has endorsed the Luken-Lee bill.

A strong argument against the FTC's jurisdiction over the professions was registered from a surprise quarter—the Attorney General of North Carolina, Rufus Edmisten. The Association of State Attorneys General had voted to support the FTC, but Edmisten told Congress that "without the Luken-Lee Amendment the FTC will have the authority to preempt state laws and regulations, an authority which I have opposed repeatedly."

Edmisten noted in a letter to Rep. L. H. Fountain (D-NC) that in 1978 he joined with the attorneys general of 16 other states to challenge "the FTC's attempt to preempt state laws relating to advertising of ophthalmic goods."

"In essence, our argument was that the FTC does not have authority to preempt state statutes. This is a principle of tremendous importance. The (Appeals) Court remanded the case, with its opinion supporting the position of the attorneys general."

Edmisten said FTC actions "have undermined what is a traditional state regulatory authority and have discouraged these groups from many self-regulatory activities." The professions, he noted, "have a long and impressive record of self-regulation in the public interest." Edmisten pointed out that the Justice Department and the states would retain their antitrust authorities over the professions.

The attorney general said the substitute plan offered by Rep. James Broyhill (R-NC) "is the antithesis to Luken-Lee and would clearly give the FTC new authority. I urge Congress not to grant the FTC power to preempt state laws."

In the ophthalmic case, Federal Appeals Court Judge Carl McGowan wrote that the FTC in issuing regulations "has at least approached the outer boundaries of its authority and may have infringed" on state's rights to regulate activities.

Meantime, the administration formally supported the Broyhill Amendment. Vice President George Bush wrote Broyhill a letter to "reaffirm and reemphasize the administration's support. . . ."

New Guidelines for Respiratory Therapy

The Blue Cross-Blue Shield Association in a major expansion of its Medical Necessity Program has provided its member plans with guidelines to eliminate unnecessary use of respiratory care.

About 25% of all hospital inpatients receive respiratory therapy, one of the fastest growing components of hospital care, with costs estimated as high as \$4 billion a year. In making the announcement, the Association said implementation of the guidelines could save hundreds of millions of dollars annually in respiratory therapy costs.

The guidelines, which were approved by the Association's board of directors, also have the endorsement of several national medical organizations within their specialty areas. These are the American College of Physicians (ACP), the American College of Surgeons

(ACS), and the American Academy of Pediatrics (AAP).

The guidelines establish definitive criteria for respiratory therapies to help assure quality patient care by ascertaining that the correct procedure is used on the right patient at the proper time.

Procedures covered by the guidelines—all of which can be an effective part of patient care—include intermittent positive-pressure breathing (IPPB), limited and complete pulmonary function tests (PFTs), incentive spirometry, postural drainage, aerosol therapy, arterial blood gas analysis, and oxygen therapy, according to the Blue Cross-Blue Shield Association.

"The respiratory therapy guidelines are intended to raise the level of cost-consciousness of our subscribers, physicians and hospitals," said Bernard R. Tresnowski, president of the Association, the coordinating agency for the nation's 103 Blue Cross and Blue Shield Plans.

"Any effort which helps control costs without lowering the quality of care will benefit everyone."

Tresnowski emphasized that the Medical Necessity Program, which previously dealt with outmoded or unproven procedures and tests as well as routine hospital admission batteries, does not mean a reduction in benefits or immediate denial of claims for subscribers. Rather, he said, "Plans will watch patterns of utilization on a hospital-by-hospital basis, and seek changes in these patterns where necessary."

The program is designed, he added, to assure that care received by patients is not only the best available but also the most cost effective.

Commenting on the program, William Y. Rial, M.D., AMA President, said the Association has reviewed a preliminary version of the guidelines on respiratory therapy and has found them to be useful and reliable recommendations.

The new guidelines spell out specific circumstances when use of the various respiratory procedures is appropriate or should be limited. They also identify circumstances when payment for routine use will be limited in the absence of special justification.

For example, many patients routinely undergo pre-operative pulmonary screening, which includes a complete battery of PFTs, for possible pulmonary disease without regard for either symptoms or history. Under the guidelines, plans are advised not to pay for PFTs unless the patient has a known pulmonary problem, has a history of smoking or an occupational history which might suggest the possibility of lung disease, or unless other special circumstances are identified.

When oxygen therapy is prescribed, documentation of need would be required after certain prescribed time periods of usage for continuation of the therapy in acute myocardial infarctions or other medical emergency situations such as acute pneumonia, pulmonary embolisms, heart failure, drug overdoses or hepatic failure.

Work to develop the new guidelines included a 1981 conference sponsored by the Blue Cross-Blue Shield Association to solicit professional opinion on the medical efficacy and cost-effectiveness of the several respiratory therapies. The one-day conference was attended by representatives of numerous national medical specialty and institutional organizations, who addressed both diagnostic and therapeutic procedures.

Patient Medication Instructions (PMI) Program

A landmark public health endeavor providing physicians with drug information instructions for patients was launched this month by the American Medical Association.

At a Washington, D.C., news conference announcing the Patient Medication Instructions (PMIs) program, Arthur Hull Hayes, M.D., commissioner of the Food and Drug Administration, said the AMA initiative will give patients across the nation information on drugs "from impeccable sources" with data "that can be relied upon." Dr. Hayes described the program as "terribly important, terribly exciting," and "well thought out."

The PMIs are 5½" x 8½" sheets printed on both sides with instructions in clear, simple language detailing the purpose of the drug, how it is to be taken, and its possible side effects. Space is provided to write in the dosage and any special instructions the physician may have for the individual patient. PMIs for individual drugs or drug classes are bound in pads of 100 sheets. They will be updated periodically.

Available now are PMIs for 20 of the most widely prescribed drugs or drug classes. Physicians may obtain them from the AMA for a nominal charge that covers shipping and handling costs. Eventually the program will provide PMIs for as many as 100 drugs or drug classes that will represent the vast majority of all prescriptions written.

Participating with the AMA in the PMI program are the United States Pharmacopeial Convention, Inc., and the American Pharmaceutical Association.

James Sammons, M.D., Executive Vice President of the AMA, told reporters PMI is "among the most important programs the AMA has ever initiated." Dr. Sammons said the benefits to patients and physicians "will be very significant."

Joseph Boyle, M.D., Chairman of the AMA Board of Trustees, said "we believe the program will help physicians and better the health of the patients we serve."

Dr. Sammons said the AMA strongly believes that patients need information about drugs prescribed for them. "And we believe just as strongly that it is the proper and vital role of the practicing physician to provide this information."

He noted that at one time the FDA was planning a mandatory program of package inserts for all prescription drugs, "but it is now encouraging support for the voluntary PMI program."

The PMI program is sponsored by the AMA Education and Research Foundation, which is seeking a broad base of financial support, including pharmaceutical firms. Contributions have passed the \$1.8-million level, including \$900,000 from the AMA.

William Apple, Ph.D., president of the APhA, commended the AMA for the program which he said is "a cost-effective means for providing needed drug therapy-related information to patients."

"This is another landmark contribution to the public health and welfare that the medical and pharmacy

professions have been able to accomplish through co-operative effort," said Apple.

William Heller, Ph.D., executive director of the United States Pharmacopeial Convention, said the AMA program is "a breakthrough effort" in the development of an economical and effective system of getting the information to the patient, getting the patient to read it, and to act on it. He said the USP "is pleased to provide its computerized patient drug use information as the basis for the PMIs."

Companies that have provided financial support for PMI so far include: Bristol-Myers Co.; Mead Johnson Foundation; Hoechst-Roussel Pharmaceuticals, Inc.; Hoffman-La Roche, Inc.; Johnson and Johnson; Eli Lilly and Co.; Revlon, Inc.; Upjohn Co.; Warner Lambert; American Home Products Corp.; Smith Kline and French Laboratories; Burroughs Wellcome; Organon Diagnostics and Pharmaceuticals, and G. D. Searle.

The AMA is drawing not only upon its own publication, *AMA Drug Evaluations*, but also on sources such as the *United States Pharmacopeia* for information. The United States Pharmacopeial Convention, Inc., is an independent, nonprofit corporation that sets official standards of purity, strength and quality for drugs.

Prospective Reimbursement Plan for Medicare

The administration is considering a specific treatment grouping scheme as the basis for the prospective reimbursement plan for Medicare.

The plan to reimburse hospitals by rates set in advance drew immediate criticism from the American Hospital Association (AHA) as "exactly the wrong way to go." Congress would have to approve the plan.

The "diagnostic related groups" idea would set advance rates that hospitals would receive for 467 diseases or conditions. Treatment of a Medicare patient with ulcers, for example, would net a hospital a predetermined sum, adjusted for different types of hospitals and regional variations.

Congress this year ordered the administration to recommend a detailed prospective reimbursement plan designed to encourage hospitals to economize.

Health and Human Services (HHS) Secretary Richard Schweiker talked about present administration thinking on the subject at a get-together with a few reporters. Later, he met with officials of major interested organizations, including James Sammons, M.D., AMA Executive Vice President, and J. Alexander McMahon, AHA President.

The input of the interested organizations will be considered by the administration before it makes its final decisions on prospective reimbursement.

However, Schweiker made clear the diagnosis related groups (DRG) method of payment is at the center of present HHS Department plans.

Hospitals have accepted the concept of prospective reimbursement but there are wide differences about

how the plan should work. McMahon told reporters DRGs are valuable for analyzing use of services, but under the Schweiker proposal "they are being twisted for use in a payment mechanism and that is exactly the wrong way to go."

Another AHA spokesman said DRGs are unsatisfactory in grouping patients with complications and do not take into account intensity of treatment.

The extent of the administration's commitment to DRGs was shown by recent publication of regulations providing that federal support for state reimbursement experiments with Medicare would be limited to plans involving DRGs.

An AHA proposal earlier this year would have based reimbursement on average costs per discharged patient. The health insurance companies have proposed a cost-containment plan that would place a set limit on Medicare reimbursement increases for hospitals.

Prospective reimbursement is just one of a host of Medicare-Medicaid economy moves the administration will ask the next Congress to approve. The issue is expected to stir controversy and heated debate among the lawmakers.

announcements

CALENDAR OF MEETINGS

NATIONAL

Jan. 17-19	Society of Thoracic Surgeons—Hilton Hotel, San Francisco
Jan. 23-29	Southern Clinical Neurological Society—Sarasota, Fla.
Jan. 29-Feb. 3	American College of Allergists—Hyatt Regency, New Orleans
Jan. 31-Feb. 3	Winter Ski and Study Symposium (sponsored by chapters 1 and district IX, Amer. Academy of Pediatrics)—Caesar's Hotel, Tahoe, Calif.
Feb. 9-14	Multidisciplinary Microsurgery at the Mardi Gras Symposium (sponsored by Southern Baptist Hospital)—New Orleans.
Feb. 11-13	Society of University Surgeons—Sheraton Hotel, Oklahoma City.
Feb. 12-19	Winter Symposium on Hematologic Malignancies (sponsored by Univ. of Arizona Cancer Center, Tucson)—Snowbird, Utah.
Feb. 13-18	Sports Medicine Symposium for Family Practitioners (sponsored by Cleveland Clinic and Univ. of Vermont)—Sugarbush, Vt.
Feb. 16-19	International Conference of the Association for Children and Adults with Learning Disabilities—Hilton Hotel, Washington, D.C.
Feb. 16-20	American College of Psychiatrists—Hilton Hotel, New Orleans.
Feb. 23-March 1	Adolescent/Young Adult Medicine (sponsored by Hurley Medical Center, Flint, Mich.)—Wailea Beach Hotel, Maui, Hawaii.
Feb. 28-March 4	International Academy of Pathology, US-Canadian Division—Hilton Hotel, Atlanta.

APRIL 1983						
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
NOTES					1	2
3	4	5	6	7	8	9
10	11	12	13	14	15	16
			TMA 148TH ANNUAL MEETING Opryland Hotel—Nashville			
17	18	19	20	21	22	23
24	25	26	27	28	29	30

The continuing medical education accreditation program of the TMA has full approval by the Accreditation Council for Continuing Medical Education. An accredited institution or organization may designate for Category 1 credit toward the AMA Physician's Recognition Award those CME activities that meet appropriate guidelines. If you wish information as to how your hospital may receive accreditation, write: Director of Continuing Medical Education, Tennessee Medical Association, 112 Louise Ave., Nashville, TN 37203

IMPORTANT NOTICE

Published in this section are all educational opportunities which come to our attention which might be of interest to our membership. As some of these are very long, full year schedules, and others are detailed descriptions of courses, in order to conserve space, most of them will be published in only one issue of the Journal.

IN TENNESSEE

VANDERBILT UNIVERSITY

Clinical Training Program

Opportunities for advanced clinical education for physicians in family practice and in various subspecialties have been developed by the School of Medicine and the Division of Continuing Education of Vanderbilt University. The practicing physician, with the guidance of the participating department chairman, can plan an individualized program of one to four weeks to meet recognized needs and interests. The experience will include contact with patients, discussion with clinical and academic faculty, conferences, ward rounds, learning individual procedures, observing new surgical techniques, and access to excellent library resources. Experience in more than one discipline may be included.

Participating Departments and Divisions

Allergy and Immunology	Samuel Marney, M.D.
Anesthesiology	Bradley E. Smith, M.D.
Cardiology	Gottlieb C. Friesinger, III, M.D.
Chest Diseases	Kenneth L. Brigham, M.D.
Clinical Pharmacology	John A. Oates, M.D.
Dermatology	Lloyd King, M.D.
Diabetes	Oscar B. Crofford, M.D.
Endocrinology	Grant W. Liddle, M.D.
Gastroenterology	Steven Schenker, M.D.
General Internal Medicine	W. Anderson Spickard, M.D.
Hematology	Sanford B. Krantz, M.D.
Infectious Diseases	Zell A. McGee, M.D.
Medicine	Grant W. Liddle, M.D.
Neurology	Gerald M. Fenichel, M.D.
Obstetrics and Gynecology	Lonnie S. Burnett, M.D.
Oncology	F. Anthony Greco, M.D.
Orthopedics	Arthur L. Brooks, M.D.
Pathology	William H. Hartmann, M.D.
Pediatrics	David T. Karzon, M.D.
Preventive Medicine	William Schaffner, M.D.
Psychiatry	Marc H. Hollender, M.D.
Radiology	A. Everett James, Jr., Sc.M., J.D., M.D.
Renal Diseases	Richard L. Gibson, M.D.
Rheumatology	Theodore Pincus, M.D.
Surgery	
Cancer Chemotherapy	Vernon H. Reynolds, M.D.
General	H. William Scott, Jr., M.D.
Neurological	William F. Meacham, M.D.
Ophthalmology	James H. Elliott, M.D.
Oral	H. David Hall, D.M.D.
Otolaryngology	Richard Hanckel, M.D.
Pediatric	Wallace W. Neblett, M.D.
Plastic	John B. Lynch, M.D.
Renal Transplantation	Robert E. Richie, M.D.
Thoracic and Cardiac	Harvey W. Bender, M.D.
Urology	Frederick K. Kirchner, M.D.

Eligibility: All licensed physicians are eligible. **Credit:** AMA Physician's Recognition Award (Category 1) and AAFP Continuing Education Accreditation. **Application:** For information and application contact Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

Continuing Education Schedule

Feb. 25	Annual L. W. Edwards Lecture in Surgery (1 hour)
March 18	Pain Management Conference (7 hours)
March 28-	Annual James C. Overall Visiting Professor
April 1	in Pediatrics
April 7	Annual Frank H. Luton Lecture in Psychiatry (1 hour)
April 9	Scientific Sessions, Tennessee Chapter, American Diabetes Association (7 hours)
April 22-23	Update in Gynecological Oncology and the Conrad Julian Memorial Lecture in Gynecologic Oncology (10 hours)
April 29-30	Annual Barney Brooks Lecture in Surgery and H. William Scott Society, Scientific Sessions
May 18-19	Annual Seminar in Psychiatry (10 hours)
May 19-21	Diagnostic Sonography Update: 1983 (20 hours)
Spring	Treatment of Depression, for nonpsychiatrists (7 hours)
June 4-5	Ophthalmology Residents Day
June 9-10	Controversies in Cardiology: 1983—Annual Scientific Sessions, Tennessee Heart Association (10 hours)
July 7-9	Vanderbilt/Bowman-Gray Fifth Annual Mountain Meeting, Internal Medicine—Asheville, N.C. (12 hours)
July 19-23	Annual Symposium on Contemporary Clinical Neurology—Hilton Head, S.C. (16 hours)

For information contact Registrar, Continuing Medical Education, Vanderbilt School of Medicine, CCC-5316 MCN, Nashville, TN 37232, Tel. (615) 322-4030.

MEHARRY MEDICAL COLLEGE

Extended Continuing Education Program

Arrangements have been made with the following services and departments in the medical school to allow practicing physicians to participate in that service's activities for a period of one to four weeks. This program provides an opportunity for physicians to study in depth for a specified period. The schedule of activities is individualized in response to the physician's request by the participating department. The experience includes conferences, ward rounds, audiovisual materials and contact with patients, residents and faculty.

Participating Departments

Anesthesiology	Ramon S. Harris, M.D.
Family Practice	John Arradondo, M.D.
Internal Medicine	
Cardiology	John Thomas, M.D.
	Kermit R. Brown, M.D.
	Qamar A. Kahn, M.D.

Chest Disease.....	Joseph M. Stinson, M.D. Paul A. Talley, M.D. Edward A. Mays, M.D.
Dermatology.....	Thomas W. Johnson, M.D. David Horowitz, M.D.
Gastroenterology.....	Ludwald O. P. Perry, M.D. Buntwal M. Somayaji, M.D.
General Medicine.....	Edward A. Mays, M.D. Robert S. Hardy, M.D.
Hematology/Oncology.....	Calvin L. Calhoun, Sr., M.D. Gregory Samaras, M.D.
Neurology.....	Henry W. Foster, M.D. Axel C. Hansen, M.D.
Obstetrics and Gynecology.....	Wallace T. Doolcy, M.D. Louis D. Green, M.D.
Ophthalmology.....	John C. Ashhurst, M.D. E. Perry Crump, M.D.
Orthopedics.....	
Pathology.....	
Pediatrics.....	
Surgery.....	
General.....	Louis J. Bernard, M.D.
Neurological.....	Charles E. Brown, M.D.
Thoracic and Cardiovascular.....	David B. Todd, M.D. Ira D. Thompson, M.D.
Urology.....	Marcelle R. Hamberg, M.D.

Fee: \$100 per week. *Credit:* AMA Physician's Recognition Award (Category 1), AAFP Continuing Education Accreditation, and Continuing Education Units by Meharry Medical College. *Application:* For further information contact Frank A. Perry, Sr., M.D., Director, Continuing Education, Meharry Medical College, 1005 18th Ave. North, Nashville, TN 37208, Tel. (615) 327-6235.

UNIVERSITY OF TENNESSEE

Continuing Education Schedule

Memphis

March 3-5	Pituitary Disorders (cosponsored with Baptist Hospital)
March 20-26	16th Annual Family Practice Review Course

For further information about any of these courses, please call the appropriate individuals below:

Memphis	Ms. Jean Taylor	Tel. (901) 528-5547
Chattanooga	Ms. Jeanne Schmid	Tel. (615) 756-3370
Knoxville	Ms. Kay Laurent	Tel. (615) 971-3345

or write or telephone: James E. Farris, Ed.D., Assistant Dean for CME, University of Tennessee College of Medicine, 800 Madison Ave., Memphis, TN 38163, Tel. (901) 528-5530.

EAST TENNESSEE STATE UNIVERSITY

Jan. 8-16	Medical Updates IV: A Review of Recent Advances in Medicine—Marriott's Mark Resort, Vail, Colo.
Jan. 21	Seminar in Forensic Medicine
Feb. 24	School Health V: Children's Problems with Schools

For information contact Department of Continuing Medical Education, Box 19660A, Quillen-Dishner College of Medicine, East Tennessee State University, Johnson City, TN 37614, Tel. (615) 928-6426, ext. 201 or 204.

OF SPECIAL INTEREST

KNOXVILLE ACADEMY OF MEDICINE

Feb. 5-12	4th Annual Knoxville Academy of Medicine Educational Ski Trip—Snowmass, Colo.
-----------	---

For information contact I. Ray King, M.D., 939 Emerald Ave., Knoxville, TN 37917, Tel. (615) 546-5335.

YOU ARE INVITED:

To participate in a Conference*
that is structured *SCIENTIFICALLY*
to qualify for AGD or CME credits and *SOCIALLY*
to allow time for family activities and fun.

Location: Vail, Colorado

Dates: March 5 to March 12, 1983

Host: Canadian American Medical Dental Association

For information contact:

CAMDA

% Great Escape Travel

P. O. Box 774168

Steamboat Springs, Colorado 80477

or

Dr. Robert Allott

P. O. Box 116

Sault Ste. Marie, Michigan 49783



*Note: Seminars comply with IRS Regulations for deductibility if the primary purpose is business and professional.

**You may think these physicians
are working alone.**



But they really have a team behind them.

These physicians spend most of their day working independently in a one-to-one doctor/patient relationship. And chances are that as a physician, you do too.

But even though you can't see it, there's a strong team supporting and protecting the medical profession, affecting your practice while you see patients, research new drugs or perform surgery. That team consists of *your medical societies*.

The American Medical Association and your state and county medical societies believe in the value of teamwork; that only by working together can we, in the face of an increasingly complex professional environment, protect your right to make responsible decisions on how to practice medicine.

We also believe that all medical societies — county, state, and national — have certain tasks that the individual physician couldn't possibly assume — and shouldn't have to.

Tasks such as keeping government regulations from interfering with your practice by representing your interests at local and national levels. And challenging regulatory measures that threaten you and your patients' interests by mounting legal campaigns to defend your rights — up to the Supreme Court if necessary.

Why do we believe that *teamwork* means so much to *all* physicians — even those who work "alone"?

Because ... IT WORKS.

Join Your Medical Societies Today.

For more information, contact your state or county medical societies, or call the AMA collect at 312/751-6196. Or return the coupon below to your state or county medical society.

- ☐ Please send me information on AMA, county, and state society membership.
- ☐ I am a member of my county and state societies; please send me information on joining the AMA.

Name _____

Street _____

City _____

State _____

Zip _____

County _____

Highlights of the TMA Board of Trustees Meeting

October 3, 1982

The following is a summary of the major actions taken by the Board of Trustees of the Tennessee Medical Association at its regular fourth quarter meeting in Nashville on October 3, 1982.

THE BOARD:

Typewriter Discount Project

Heard a report that inquiries received from the membership indicated approximately 150 people needed typewriters during the year, however only 20 immediate orders had been received. A minimum of 50 orders are necessary to negotiate a contract.

Committee on Emergency Medical Services

Heard a report from the Committee on Emergency Medical Services that a Farm Accident Prevention Exhibit will be constructed in the Agri-Center Complex to be built in Memphis. Funding will be requested from the TMA Board.

Impaired Physician Committee

Heard a report from the Impaired Physician Committee that 27 physicians have been returned to their practice after undergoing a treatment program, 12 within the past year. The need for employment of a part-time medical director was also discussed. A recommendation will be made to the Board in the coming year regarding the possibility of employing a part-time medical director.

Committee on Scientific Affairs

Heard a report from the Committee on Scientific Affairs that 23 specialty societies met with the Committee for the purpose of planning and approving scientific programs to be conducted during the 1983 TMA Annual Meeting. Programs of 18 societies were approved for Category 1 credit and five for Category 2 credit toward the AMA Physician's Recognition Award. The TMA Auxiliary, two medical assistant groups, one voluntary health group, SVMIC and medical alumni associations from Vanderbilt and the University of Tennessee will meet in conjunction with TMA during the 1983 Annual Meeting.

SVMIC

Heard a report that efforts are now under way by State Volunteer Mutual Insurance Company to insure hospitals, which hopefully will eliminate problems that occur when a staff physician and the hospital are insured by different insurance carriers. Dr. J. Kelley Avery, Union City, has been employed on a part-time basis. A new attorney has been hired, making a total of four on the SVMIC staff.

IMPACT Board Appointments

Reappointed the current IMPACT Board members for a one-year term beginning Jan. 1, 1983.

Emergency Medical Service Committee Appointments

Appointed Dr. Neil B. Edwards, Memphis, to serve on the EMS Committee in place of Dr. William Webb who has resigned.

Long-Term Health Care Committee Proposal

Requested Dr. Carl E. Adams, Murfreesboro, chairman of the TMA Long-Term Health Care Committee, to prepare an outline for approval and/or endorsement of the establishment of a foundation for the purpose of receiving and donating funds to medical schools in Tennessee for geriatric education and research.

TMA-Student Education Fund Request

Agreed to loan \$50,000 to the TMA-SEF and to introduce a resolution to the 1983 TMA House of Delegates to increase the amount of dues allotted annually to the TMA-SEF from \$10 to \$25.

Drug Prescribing Program

Heard a report from Dr. William O. Miller, Knoxville, on the drug prescribing program, stating that the program had been well received by physicians in the state. The field work for the project has been completed and the statistical analysis data is being compiled for presentation. A detailed slide presentation of the methods used in the program was given by Dr. Wayne Ray of the Vanderbilt Medical School.

**Correspondence from
Council of Medical
Specialty Societies**

Expressed opposition to proposed changes in the method of examining physicians for licensure as recommended by the Federation of State Medical Boards. FSMB has proposed to eliminate the National Board of Medical Examiners' Certificate and use only FLEX. The FLEX exam is to be separated into two parts with passage of the first part required before entry into the second year of postgraduate training. Tennessee's Board of Medical Examiners has expressed opposition to the proposed changes.

**Health Planning Committee
Recommendation**

Heard a report on a state study group appointed by the governor to make recommendations for the restructure of the Health Planning Program in Tennessee. The study group determined that the greatest problem with the present program was that of unclear and conflicting goals of the various agencies in the process. The TMA Committee on Health Planning met Sept. 19 to review the document prepared by the study group.

Medicaid Fiscal Agent Status

Heard a report that EDS Federal had been given a new contract as fiscal agent for the state Medicaid Program. Subsequent to the cancellation of the Computer Sciences Corp. contract by the state, CSC went to court in an attempt to block this move. CSC was unsuccessful and the new contract was awarded to EDS Federal.

**Tennessee to Qualify for 6th
AMA Delegate and Alternate**

Heard a report that as a result of AMA's ability to solicit membership in our state via a direct billing and solicitation method, authorized by the AMA House of Delegates last year, TMA will qualify as of Dec. 31, 1982, to send the sixth delegate and alternate to the 1983 AMA meetings.

**Financial Statement and
Proposed Budget**

Approved the TMA operating report dated Jan. 1, 1982 to Sept. 30, 1982, and a 1983 proposed budget, with a total estimated income of \$859,700 and total estimated expenditures of \$881,835.



PENINSULA HOSPITAL

Louisville, Tennessee

Peninsula Hospital is a 75-bed private psychiatric hospital, providing treatment for acute emotional disturbances, drug and alcohol abuse, for both adolescents and adults.

Peninsula is fully accredited by the Joint Commission on Accreditation of Hospitals and is a member of the American Hospital Association, Tennessee Hospital Association, Federation of American Hospitals and the National Association of Private Psychiatric Hospitals.

The Professional Staff is composed of psychiatrists, licensed clinical psychologists, psychiatric social workers, psychiatric registered nurses, adjunctive therapists, and mental health workers. This experienced team, together with ancillary hospital workers, provides a dynamic treatment program designed for each individual to bring about change and emotional growth in the patient.

Peninsula provides a special treatment program for alcoholic and drug abuse patients. Another program is designed specifically for adolescents. The adolescent treatment program includes a fully staffed school program. An

individual education plan is designed for each adolescent.

A variety of therapeutic programs are scheduled for each patient's day. These include intensive individual psychotherapy, group psychotherapy, community meetings with staff and many collateral activities.

Patients may be referred to Peninsula by their own physician, former patients, or may be self-referred. Voluntary patients as well as those who are directed to the hospital by a court are accepted for treatment. It is desirable for the hospital to receive information from physicians, therapists, family and friends who know the patient. Treatment is individualized based upon the needs of the patient.

Appointments for admission can be made by calling the hospital directly. The phone numbers are:

Knoxville
Maryville

573-7913
983-8216

Tennessee Medical Association's

Exclusively Approved

**Disability Insurance
&
Major Hospital Insurance
Programs**

Administered By

Smith, Reed, Thompson & Ellis Co.

P.O. BOX 1280

NASHVILLE, TENNESSEE 37202

PHONE 255-7625

Manager

WILLIAM H. ELLIS, C.L.U.

Supervisors

ROBERT K. ARMSTRONG

THOMAS G. HENRY, JR.

ROBERT M. GARRIGUES

Underwritten

SINCE THE PROGRAM'S INCEPTION IN 1942

By

Commercial Insurance Company

Newark, New Jersey

1982 MEMBERSHIP ROSTER

TENNESSEE MEDICAL ASSOCIATION

An alphabetical listing of members of the Tennessee Medical Association by county medical society is published as a service to the membership. An asterisk (*) denotes physicians exempt from dues. A number sign (#) denotes a student member.

BEDFORD COUNTY MEDICAL SOCIETY

BARNES, DONALD D, SHELBYVILLE
BEAVERS, LANA SHARON, SHELBYVILLE
* CHAMBERS, WALLACE LEE, SHELBYVILLE
* COOPER, ALBERT LEE, SHELBYVILLE
DERRYBERRY, JOHN S, SHELBYVILLE
FARRAR, TAYLOR, SHELBYVILLE
FELDHaus, JOSEPH H, SHELBYVILLE
JAYAKOBY, FRANK LORENZ, SHELBYVILLE
JOHNSON, SUE PAINE WELCH, SHELBYVILLE
* MOULDER, GRACE E, SHELBYVILLE
OWNBY, FRED OILLARD, BELL RUCKLE
RICH, EARL FREEMAN, SHELBYVILLE
RICHARDS, AUBREY THOS, SHELBYVILLE
ROGERS, BENJ CARL, SHELBYVILLE
SELLS JR, SAMUEL P, SHELBYVILLE
STUBBLEFIELD, CARL THOS, SHELBYVILLE
WOMACK, SARA, SHELBYVILLE

BENTON-HUMPHREYS COUNTY MEDICAL SOCIETY

ALI, MAYSUON SHOCAIR, WAVERLY
ALI, SUBHI OAWUD SUBOH, WAVERLY
BLACKBURN, WM H, CAMDEN
BLANTON, HAROLD L, COURTLAND, AL
BOURNE JR, ROBERT I, CAMDEN
BUTTERWORTH, JOE S, CAMDEN
GANDHI, MANHAR C, MEMPHIS
GREGORY, J GORDON, WAVERLY
HARTLEY, MARK F, WAVERLY
LAWSON, JAMES J, NEW JOHNSONVILLE
MC CLURE, WALLACE JOE, WAVERLY
NAGY, HUBA, WAVERLY
NAGY, LOIS, WAVERLY
STEPHENS, JOE WM, WAVERLY
WALKER, ARTHUR WINFREY, WAVERLY
WRIGHT, WAYNE J, MARION, IL

BLOUNT COUNTY MEDICAL SOCIETY

AGEE, OLIVER KING, MARYVILLE
AHN, KYUNG M, MARYVILLE
AKIN, HOBARD E, MARYVILLE
BEARD, MARVIN ROBISON, MARYVILLE
BLANKS, BILLY HARRELL, MARYVILLE
DOLLINGER JR, JOHN A, MARYVILLE
BOWEN, JOHN H, MARYVILLE
CALLAWAY JR, HENRY A, MARYVILLE
CALLAWAY, JAMES MILLER, MARYVILLE
CHRISTOFFERSON, JAMES W, MARYVILLE
CROWDER, CLAY G, MARYVILLE
* CROWDER, WM C, MARYVILLE
CROWDER, WM WILSON, MARYVILLE
DELAHMIT, JAMES RICHARD, MARYVILLE
DOOR, DAVID C, KNOXVILLE
DUKEYER, RUSSELL HARWELL, MARYVILLE
ELLIOTT, C DOLF, MARYVILLE
ELLIOTT, WM EARL, MARYVILLE
EVANS, SAMUEL D, MARYVILLE
FINNEY JR, RAYMOND A, MARYVILLE
FLICKINGER, TED LAWRENCE, MARYVILLE
GREEN, BRUCE QUINTON, LOUISVILLE
HARALSON III, ROBT HATTON, MARYVILLE
* HARALSON JR, ROBT H, MARYVILLE
HATFIELD, CHAS NEWMAN, MARYVILLE
HAUN JR, LOUIS EUGENE, MARYVILLE
HENDERSON JR, JOE S, ALCOA
* HENRY, JAMES SPENCER, ALCOA
HOFFMANN, PAUL WILFRIED, MARYVILLE
HOLDER, JAMES THOS, MARYVILLE
HUXARD, CECIL B, MARYVILLE
HUFFMAN, JOHN RAYMOND, MARYVILLE
INGRAM III, JOHN JACKSON, MARYVILLE
ISBELL JR, HOMER L, MARYVILLE
JARVIS, S CRAIG, MARYVILLE
KAMPERMAN, COLIN LEE, ALCOA
KINTNER, ELGIN P, MARYVILLE
LAMBETH, SAM L, MARYVILLE
LAUGHMILLER, ROY W, MARYVILLE
LENTZ, JULIAN C, FAYETTEVILLE, NC
LEYEN, ROBT F, ROCKFORD
LUCAS, MELINDA ANN, ROCHESTER, NY
MANDRELL, JOE THOS, ALCOA
* MANNING, JOHN FRANKLIN, MARYVILLE
MARMON, KENNETH WALDO, MARYVILLE
MAYBERRY, ALTON RAY, MARYVILLE
MC CALL, BENNY GORDON, MARYVILLE
MC CROSKY, DAVID L, MARYVILLE

MC KINNON JR, NORMAN A, MARYVILLE
MILLARD, JAMES HENRY, MARYVILLE
MOORE, WILLIAM R, MARYVILLE
MYNATT, RICHARD J, TOWNSEND
MYNATT, ROBT D, MARYVILLE
NELSON JR, HENRY S, MARYVILLE
NELSON, HENRY SPERRY, KNOXVILLE
PERSHING, STEPHEN D, MARYVILLE
PETERSON, MARVIN DEAN, MARYVILLE
PHELAN, JACK STANISLAUS, MARYVILLE
PITTENGER, JOHN, MARYVILLE
PROFFITT, JAMES NICHOLAS, MARYVILLE
PROFFITT, ROBT DAVID, MARYVILLE
* RAMSEY, BAINARD PERCY, MARYVILLE
RAPER, CHAS ALLEN, MARYVILLE
RICCIARDI, JAMES EDWARD, MARYVILLE
ROBERTS JR, JACK T, MARYVILLE
ROMANS, ALLAN, MARYVILLE
SEATON, ROBERT W, MARYVILLE
SIMPSON JR, OSCAR L, MARYVILLE
SMALLEY JR, J BRYAN, MARYVILLE
THURSTON, TIMOTHY WM, MARYVILLE
VANDERGRIF, HARRIS T, MARYVILLE
VINSANT, LOWELL EUGENE, MARYVILLE
WHITE, RICHARD H, MARYVILLE
YARBOROUGH, JOHN A, MARYVILLE

BRADLEY COUNTY MEDICAL SOCIETY

ALDRICH, WM T, CLEVELAND
ALLEN, ROBT LEWIS, CLEVELAND
APPLING, JOHN MORGAN, CLEVELAND
ARNOLD JR, CHAS WM, CLEVELAND
BARON, RICHARD JAMES, BENTON
BATCHELOR, MARVIN R, CLEVELAND
BRYAN, JOHN MILTON, CLEVELAND
BYERS, GLEN MARSH, CLEVELAND
BZIK, PETER, CLEVELAND
CHAMBERS, JOHN WALLACE, CLEVELAND
CHASTAIN JR, CHALMER, CLEVELAND
CHASTAIN, ALLAN CHALMER, CLEVELAND
COFER, ROBT HARRISON, CLEVELAND
COLLINS, LARRY C, CLEVELAND
DUNCAN, EDDIE MORRIS, CLEVELAND
TELKER, ALBION ESTES, CLEVELAND
FREE, JACK R, CLEVELAND
GIBSON, DONALD BAKER, CLEVELAND
GOLDMAN, MAURICE SAM, CLEVELAND
HAMILTON, HOWARD KEN, CLEVELAND
HARTING, DON C, CLEVELAND
HAYS, ROBT DANL, CLEVELAND
HUGHES, CHAS RICHARD, CLEVELAND
JOHNSON JR, WM FRANK, CLEVELAND
JOHNSON, WM W, CLEVELAND
JOHNSTON, HARRY B, CLEVELAND
JONES JR, FRANK KELLEY, CLEVELAND
KIM, STEVEN, CLEVELAND
KIMBALL, CECIL HARRY, CLEVELAND
KYLE JR, CLYDE A, CLEVELAND
LEE, WM REECE, COPPERHILL
LOWE, JAMES CECIL, CLEVELAND
* MC COIN, JOE, CLEVELAND
MITCHELL, HAYS, CLEVELAND
MONNIG, JACK ANTHONY, CLEVELAND
MOSKOWITZ, DAVID L, CLEVELAND
MURPHY, JOHN ALLEN, CLEVELAND
MUTHS, FREDERICK A, CLEVELAND
NEWTON, NICHOLAS, CLEVELAND
PIERCE, E HARRIS, CLEVELAND
POWELL, JOHN MANLEY, CLEVELAND
PROFFITT, WM I, CLEVELAND
ROBINSON, DONALD EDWIN, CLEVELAND
RUGNESS, JOHN A, CLEVELAND
ROMAINE, CHAS RYD, CLEVELAND
SCRUGGS, FENTON LEE, CLEVELAND
SMITH, WM R, CLEVELAND
* STANBERRY, WM CECIL, CLEVELAND
STANDRIDGE, JOHN B, CLEVELAND
SWART JR, EDWIN GIEFORD, CLEVELAND
THURMAN, JAMES ROBT, CLEVELAND
VARNELL, GILBERT ABEL, CLEVELAND
YOUNGER, CLYDE P, CLEVELAND

BUFFALO RIVER VALLEY MEDICAL SOCIETY

ALDERSON, CHAS MALCOLM, PARSONS
ANAND, VENA, HOHENWALD
ANAND, VIRENDER, HOHENWALD
AVERETT, STEPHEN L, LINDEN
BLENDER, WILLIAM, LINDEN
COLEMAN, ROBT M, DICKSON

ELROU, PARKER DAVID, CENTERVILLE
HOLLADAY, BERTIE L, CENTERVILLE
MC GINLEY, JAMES HENRY, CENTERVILLE
MEERS, JIMMY ARNOLD, PARSONS
REDDY, RAMESH K, DECATURVILLE
TURNER JR, GORDON H, LINDEN
TURTON, FREDERICK E, CENTERVILLE

CAMPBELL COUNTY MEDICAL SOCIETY

BREWER, JOHN E, JELICO
BURRELL, JOHN S, LAKE CITY
CLINE JR, ELIJAH GRADY, LA FOLLETTE
COHEN, THOS LEONARD, LA FOLLETTE
CRUTCHFIELD, JAMES DONALD, LA FOLLETTE
DAY, GEO LOUIS, HARRIGATE
FARRIS, JAMES CLARENCE, LA FOLLETTE
GILES, JAMES W, LA FOLLETTE
HALL III, DONALD DAKER, LA FOLLETTE
HARTMAN, DONALD D, JELICO
PRATER, CHAS ALVIN, JELICO
PRYSE, JOHN C, LA FOLLETTE
SEARGEANT JR, LEE JESS, LA FOLLETTE
THOMPSON, GEO STANLEY, HARRIGATE
WALKER, JESSE LEE, JELICO
WILKENS, CHAS HENRY, JELICO
WOOD, BURGIN HENRY, LA FOLLETTE
WOODRUM, MARY ANN, JELICO

CHATTANOOGA-HAMILTON COUNTY MEDICAL SOCIETY

ABRAMSON, JEROME H, CHATTANOOGA
ADAMS JR, JESSE EARL, CHATTANOOGA
ADAMS JR, JOHN W, CHATTANOOGA
ADOCK, CHARLES R, SO PITTSBURG
AIKEN, WM PRIGMORE, CHATTANOOGA
AKIN, EDGAR DANL, CHATTANOOGA
ALBRITTON, JOHN THOS, CHATTANOOGA
ALISAGO, HILDA NAVERA, CHATTANOOGA
ALLEN, BILLY JASON, CHATTANOOGA
ALLEN, GEORGE E, CHATTANOOGA
ALPER, CHAS H, CHATTANOOGA
ANDERSON, HARRY S, CHATTANOOGA
APRILETA, SINESIO Z, CHATTANOOGA
* ARMSTRONG, JONATHAN J, LOOKOUT MTN
ARNOLD, COLEMAN LEE, CHATTANOOGA
ARNOLD, IRA L, CHATTANOOGA
ATKINSON, JOE SPROTT, CHATTANOOGA
AUG, ROBERT G, CHATTANOOGA
AVERY, JOEL EUGENE, CHATTANOOGA
BAILEY, PHILIP B, DALTON, GA
BALLARD JR, FRED B, CHATTANOOGA
BANKS JR, WOODRUFF A, CHATTANOOGA
BANKS, SAM L LOUIS, CHATTANOOGA
BARD, RALPH MICHAEL, CHATTANOOGA
BAREDDY, VENKATA R, CHATTANOOGA
BARNES, DAVID R, CHATTANOOGA
BARNES, H VEROAIN, CHATTANOOGA
BARNETT III, ROBERT M, CHATTANOOGA
BAUTISTA, JUANCHO C, CHATTANOOGA
RECHARD, DOUGLAS L, CHATTANOOGA
BERGLUND, ROBERT K, CHATTANOOGA
BERRY, WM BARTON, CHATTANOOGA
BESEMANN, EBERHARD FRANZ, CHATTANOOGA
BINDER, SAM L, CHATTANOOGA
* BISHOP, WM RUSSELL, CHATTANOOGA
BLAKE, CHAS ALAN, CHATTANOOGA
BLOUNT JR, HENRY C, CHATTANOOGA
BOATWRIGHT, CATHERINE A, CHATTANOOGA
BOATWRIGHT, ROBT W, HIXSON
BOAZ JR, LONNIE ROY, CHATTANOOGA
BOEHM, PETER ERIC, CHATTANOOGA
BOEHM, WALTER EDWARD, CHATTANOOGA
BOEHM, WALTER MICHAEL, CHATTANOOGA
BOISER, ANITA MADRIA, CHATTANOOGA
BOISER, ARISTIDES L, CHATTANOOGA
BOLINGER, JOHN MCCALLIE, CHATTANOOGA
BONDER, MICHAEL IAN, CHATTANOOGA
BOWDEN JR, HARVEY D, CHATTANOOGA
BOWERS JR, JEMISON D, CHATTANOOGA
BOWERS, ROBT EUGENE, CHATTANOOGA
BOYELL, JOHN FREDERICK, CHATTANOOGA
BRACKETT, WM DAVID, CHATTANOOGA
BRANNEN, FRANK S, CHATTANOOGA
BRANSON, TERRY WAYNE, CHATTANOOGA
BRFMER JR, JOEL LEWIS, CHATTANOOGA
BRICE, CHARLES TERRY, CHATTANOOGA
BRIMI, JOHN BENJ, CHATTANOOGA
BRIDGESTONE, PAUL A, LOUISVILLE, KY
BROOKS, JOEL DEVOLANTINE, CHATTANOOGA

BROOKSBANK, RONALD C, CHATTANOOGA
 BROWN, HUGH P, CHATTANOOGA
 BROWN, NEIL CHAS, CHATTANOOGA
 BROWN, REID LLEWELLYN, CHATTANOOGA
 BRYAN, CALVIN PATRICK, CHATTANOOGA
 BUCHANAN JR, THOS F, CHATTANOOGA
 BUCHNER III, EDWARD F, CHATTANOOGA
 BUCHNER, WM FRANCIS, CHATTANOOGA
 BULLARD, ARCH H, CHATTANOOGA
 * BURKE, JOHN ARTHUR, HILTON HEAD ISL, NC
 BURNS, RANDEL PHILLIP, CHATTANOOGA
 BUTTRAM JR, WM R, CHATTANOOGA
 BUTTRAM, THOS LATHAM, CHATTANOOGA
 CAINE JR, WINSTON P, CHATTANOOGA
 CALDWELL, GARY BLAINE, CHATTANOOGA
 * CALDWELL, JAMES L, LOOKOUT MTN
 CALHOUN, RICHARD ALLEN, CHATTANOOGA
 CALLAHAN, ROBERT B, CHATTANOOGA
 CAMPBELL, DONALD ROSS, CHATTANOOGA
 CAMPBELL, WILLIAM O'NEAL, CHATTANOOGA
 CANNON, DON ALLEN, CHATTANOOGA
 CANNON, GEO MARSHALL, SIGNAL MOUNTAIN
 * CANON, MAURICE A, CHATTANOOGA
 CARROLL, RAMON LEONARD, CHATTANOOGA
 CAUGHRAN, BENNETT W, CHATTANOOGA
 CAUGHRAN, DONALD G, CHATTANOOGA
 CHADWICK, DAVID AIREY, CHATTANOOGA
 CHAMBERLAIN II, MORROW, CHATTANOOGA
 * CHASTAIN, CLEO, SAN ANTONIO, TX
 CHENG, TIEN H, CHATTANOOGA
 CLARK, C ROBT, CHATTANOOGA
 CLARK, JERRY DOYLE, CHATTANOOGA
 CLARK, MURRELL O, CHATTANOOGA
 CLEAVELAND, CLIFTON RANCE, CHATTANOOGA
 CLEMENTS, JOEL BENJ, CHATTANOOGA
 * CLEMENTS, OSCAR H, CHATTANOOGA
 CODDINGTON, ROBT CHAS, CHATTANOOGA
 COLLINS, JOHN RICHARD, CHATTANOOGA
 * COMBES, FRANK CHAS, CHATTANOOGA
 CONN, ERIC HADLEY, CHATTANOOGA
 * COOLEY, JOHN L, TARPON SPRINGS, FL
 COREY JR, JAMES HICKS, CHATTANOOGA
 COX, GEO EDWIN, CHATTANOOGA
 COX, JOHN MICHAEL, CHATTANOOGA
 COX, SUE CLARKE, CHATTANOOGA
 CRAFT, PHIL DOUGLAS, CHATTANOOGA
 CRAIG, ROBERT E LEE, CHATTANOOGA
 CRANWELL, JOHN O, CHATTANOOGA
 * CRANWELL, THOS G, PIKEVILLE
 CRAWLEY JR, JAMES F, CHATTANOOGA
 CRAWLEY JR, WILLIAM O, ROSSVILLE, GA
 CREECH, ROBERT H, CHATTANOOGA
 CREEL JR, JAMES HEATON, CHATTANOOGA
 CROWELL, JOHN M, CHATTANOOGA
 * CURREY, JOE T, CHATTANOOGA
 CURREY, THOS WOODRUFF, CHATTANOOGA
 CURTIS, THOS H, CHATTANOOGA
 OAGHLIAN, REDROS O, CHATTANOOGA
 OAHRLING II, BRUCE E, CHATTANOOGA
 DANIELL, MALCOLM BUTLER, CHATTANOOGA
 DAVIS JR, JAMES PHILLIP, CHATTANOOGA
 DAVIS, JAMES WILSON, CHATTANOOGA
 DAVIS, JIMMY B, CHATTANOOGA
 DAVIS, LARRY W, CHATTANOOGA
 DE RUITER, PETER LOUIS, CHATTANOOGA
 DELOS REYES, VALENTIN R, CHATTANOOGA
 DEMOS, ROBT G, CHATTANOOGA
 * DERRYBERRY, O MERTON, SIGNAL MOUNTAIN
 DICKINSON, ELIZABETH B, HIXSON
 DICKSON, RICHARD C, CHATTANOOGA
 DODDS, JOS JAMES, CHATTANOOGA
 DODSON, DAVID BRYAN, CHATTANOOGA
 DONALDSON, RICHARD B, CHATTANOOGA
 DONALDSON, RICHARD WM, CHATTANOOGA
 DOWELL, WM CURTIS, CHATTANOOGA
 DRAKE, JAMES ROBT, CHATTANOOGA
 DRESSLER, STANLEY JAY, CHATTANOOGA
 DRUCKER, DAVID HABER, CHATTANOOGA
 DUGAN, PHILIP JERALD, CHATTANOOGA
 DUVOISIN, PETER MARC, CHATTANOOGA
 DWYER, WM KNUXLES, CHATTANOOGA
 DYER JR, WM CARL, CHATTANOOGA
 EBERLE, DAVID E, CHATTANOOGA
 ELDRIDGE, FRANK R, HIXSON
 ELLIS, JOHN CLYDE, CHATTANOOGA
 ELMORE, HORACE L, BRIDGEPORT, AL
 ELROD, BRUCE A, FT OGLETHORPE, GA
 EVANS JR, HENRY C, SIGNAL MOUNTAIN
 EVANS, JOHN THOS, CHATTANOOGA
 EYSSER, JAMES EDWARD, CHATTANOOGA
 FARR, JOHN F, CHATTANOOGA
 FEINBERG, EDWARD B, CHATTANOOGA
 FEINTUCH, THEODORE ARD, CHATTANOOGA
 FENNEWALD, CLARENCE L, HIXSON
 FERNANDEZ CRUZ, PAZ A, CHATTANOOGA
 * FLETCHER, RICHARD V, CHATTANOOGA
 * FOLEY, JAMES MITCHELL, CHATTANOOGA
 FORD, AUGUSTUS C, CHATTANOOGA
 FORSYTH, G PAUL, CHATTANOOGA
 FOWLER, WM ROBT, CHATTANOOGA
 FRANCIS, GUY M, CHATTANOOGA
 FRANK, STUART AMES, CHATTANOOGA
 FRANKLIN, JOHN DAVID, CHATTANOOGA
 FRED LAUREL PEREZ JR MD, CHATTANOOGA
 FRYE JR, AUGUSTUS H, CHATTANOOGA
 GALBRAITH, JOHN NEIL, CHATTANOOGA
 GAZALEH, SHAWN, CHATTANOOGA
 GIBSON JR, GEO CLIVE, CHATTANOOGA
 GILES JR, ROBT H, CHATTANOOGA
 GILLEY, EDWIN WAYNE, CHATTANOOGA
 GINSBERG, JOEL FINE, CHATTANOOGA
 * GLEFFE JR, RALPH E, LONGWOOD, FL
 * GOLLEY, DEAN W, VENICE, FL
 GOODLAD, JAMES K, CHATTANOOGA
 GOTHARD, AL WALTON, CHATTANOOGA
 GRAHAM III, FRANK B, CHATTANOOGA
 GRAVES, CHAS G, DUNLAP
 GRAVES, JOS WILBURN, CHATTANOOGA
 GREEN, WM ROY, CHATTANOOGA
 GREER, WM C, CHATTANOOGA
 GREGG III, FRED M, CHATTANOOGA
 GRISSOM, WALLACE DOYLE, CHATTANOOGA
 HACKWORTH JR, JOHN RIBLE, SOUTH PITTSBURG
 HADDOEN, RONALD O, MESA, AR
 HAGOOD JR, ROBT B, CHATTANOOGA
 HALL, DAVID PARKS, CHATTANOOGA
 HAMPTON III, FOSTER T, CHATTANOOGA
 HAREN, VINCENT JAMES, CHATTANOOGA
 HARNSEBERGER, BENJ OANL, CHATTANOOGA
 HARRIS, CHARLES DENNIS, CHATTANOOGA
 * HARRISON, ELLIOTT F, VENICE, FL
 * HARTUNG, CARL ADAM, CHATTANOOGA
 HARVEY, HATHAWAY K, CHATTANOOGA
 HASKINS, BREWRY EDGAR, RINGOLO, GA
 HAYRON JR, WILLIAM S, CHATTANOOGA
 HAYRON, JAMES BLACKMAN, SOUTH PITTSBURG
 HAWKINS, CHAS W, CHATTANOOGA
 HAWKINS, J HENRY, CHATTANOOGA
 HAWKINS, PAUL EDISON, CHATTANOOGA
 HAWKINS, STEPHEN S, CHATTANOOGA
 HAYES JR, CAULEY WILBUR, CHATTANOOGA
 HAYES, THOMAS E, FT OGLETHORPE, GA
 * HAYS, JAMES MARTIN, AIR FORCE
 HEADRICK JR, WM L, SOUTH PITTSBURG
 HEADRICK, JAMES R, CHATTANOOGA
 HEDDEN, JAMES W, CHATTANOOGA
 HELLMANN SR, ROBERT S, CHATTANOOGA
 * HENNING, HAROLD BERGER, CHATTANOOGA
 HENRIKSEN, JENS DAVID, COLLEGE DALE
 HENRY, WARREN B, CHATTANOOGA
 * HENSHALL JR, GEO K, CHATTANOOGA
 HEYWOOD III, HUMPHREY B, CHATTANOOGA
 * HICKEY, HOMER DAVID, CHATTANOOGA
 HIGHTSHUE, DAVID CLAYTON, CHATTANOOGA
 HINSON JR, JAMES M, CHATTANOOGA
 HIXSON, JACK OAK, CHATTANOOGA
 HOBACK JR, JAMES WILLIAM, CHATTANOOGA
 HODNETT, CARY G, CHATTANOOGA
 HOFMEISTER, RICHARD G, CHATTANOOGA
 HOLLIDAY JR, POPE B, CHATTANOOGA
 HUNG, MOON WHA, CHATTANOOGA
 HUOPER, CHAS MC DOWELL, CHATTANOOGA
 HOPPE, RUDOLPH AUGUST, CHATTANOOGA
 HOPPER, RICHARD E, CHATTANOOGA
 * HOUSE, JOHN O, CHATTANOOGA
 HOWICK JR, JOHN R, CHATTANOOGA
 HUA, VIN-PAUL, PALMER
 HUGHES, ALAN O, CHATTANOOGA
 HUNT, NOEL CLARENCE, CHATTANOOGA
 HUTCHERSON, WM POWELL, CHATTANOOGA
 * HYATT, HERSCHEL H, COPPEPHILL
 * ISBELL, O, CHATTANOOGA
 JAMES, OABNEY, CHATTANOOGA
 JAMES, DEWITT B, CHATTANOOGA
 JENKINS JR, OLIVER W, CHATTANOOGA
 JENSEN, ROBT LLOYD, COLLEGE DALE
 JEONG, WOO-GILL, CHATTANOOGA
 JEONG, YUNE GILL, CHATTANOOGA
 JOHNSON JR, J PAUL, CHATTANOOGA
 * JOHNSON JR, JOS WILSON, LOOKOUT MTN
 JOHNSON, EDWARD DOWNEY, SALE CREEK
 JONES, GERALD ISOM, HIXSON
 JONES, HARRY E, CHATTANOOGA
 JONES, RUSSELL A, CHATTANOOGA
 KADRIE, HYTHAM ALI, CHATTANOOGA
 KAPLAN, HYMAN M, CHATTANOOGA
 KATO, YUTAKA, CHATTANOOGA
 KELLEY, PATRICK ALAN, CHATTANOOGA
 KENNEDY, CHARLES DAVID, CHATTANOOGA
 KENNEDY, JOHN HENRY, CHATTANOOGA
 * KILLEFFER, JOHN JACOB, CHATTANOOGA
 KIMSEY, CHAS W, CHATTANOOGA
 KING JR, WALTER HUGHEY, CHATTANOOGA
 KIRK, DUNWOOD L, CHATTANOOGA
 KIRKPATRICK, GEORGE L, CHATTANOOGA
 * KISTLER, GENE HAVILAND, SIGNAL MOUNTAIN
 * KITCHEN, DELMAS KENDALL, CLEVELAND
 KNIGHT, CECIL DEWAYNE, CHATTANOOGA
 KOSANOVICH, MICHAEL, CHATTANOOGA
 KOVAN, JEFFREY JAY, CHATTANOOGA
 KRAUSE, RICHARD ALAN, CHATTANOOGA
 KUNDA, SARMA R, CHATTANOOGA
 KUZUCU, ETHEM YILDIRIM, CHATTANOOGA
 LABRAADOR JR, DANL P, CHATTANOOGA
 LABRAADOR, IRENE J, CHATTANOOGA
 * LANDRY, RUDOLPH MATAS, LOOKOUT MTN
 * LANGSTON, MANLY FROST, SIGNAL MOUNTAIN
 LANSDOWN JR, FREDERICK D, CHATTANOOGA
 LARAMORE, JOHN WADE, CHATTANOOGA
 LASKY, RICHARD SAML, CHATTANOOGA
 LASSITER, LAWRENCE H, CHATTANOOGA
 LAVECCHIA JR, JOS V, CHATTANOOGA
 LAWRENCE JR, HARRY M, CHATTANOOGA
 LAWRELL JR, STEWART, CHATTANOOGA
 LAYNE, J T, COPPERHILL
 LETT, MICHAEL F, CHATTANOOGA
 LEWIS II, JAY FREDERICK, CHATTANOOGA
 LEWIS, ALLEN DAVID, SIGNAL MOUNTAIN
 LITTELL III, LESTER F, CHATTANOOGA
 LITTELL JR, LESTER F, DAYTON
 LIU, CHUNG YUEN, CHATTANOOGA
 * LIVINGSTON, PHILIP H, CHATTANOOGA
 LONG, IRA MORRIS, CHATTANOOGA
 LOVE, MICHAEL ALLAN, CHATTANOOGA
 LUAYON, JOSE M, CHATTANOOGA
 MARE, ROBT E, CHATTANOOGA
 MAC GUIRE JR, WM B, CHATTANOOGA
 MAC NAUGHTON JR, DAVID V, CHATTANOOGA
 MACKLER, DONALD F, CHATTANOOGA
 MALDONADO, LUIS GONZALO, SIGNAL MOUNTAIN
 MANI, VENK, CHATTANOOGA
 * MANSON, TIM JOS, CHATTANOOGA
 MARSH, CLARENCE BRUCE, CHATTANOOGA
 * MARSH, WM HOLLISTER, CHATTANOOGA
 MASSOUD, HOSSEIN, CHATTANOOGA
 MATTHEWS, WILLIAM EDWIN, CHATTANOOGA
 MAY, STEVEN L, HIXSON
 * MC CALL, COOPER H, CHATTANOOGA
 * MC CALLIE, DAVID P, CHATTANOOGA
 * MC CRAVEY, AUGUSTUS, CHATTANOOGA
 MC DONALD JR, CHAS O, CHATTANOOGA
 MC DOUGAL, JOHN SMALL, CHATTANOOGA
 MC DOW, PRESTON COCKE, CHATTANOOGA
 MC ELROY, GEO R, CHATTANOOGA
 MC FADDEN, ROGER RANDALL, CHATTANOOGA
 MC GAULEY JR, JOHN R, CHATTANOOGA
 MC GRAW JR, RALPH, CHATTANOOGA
 MC INTOSH, EDEL F, CHATTANOOGA
 MC KINNEY, JAMES E, CHATTANOOGA
 MC LEAN, SUSAN J, CHATTANOOGA
 MC MILLAN, JAMES GORDON, JASPER
 MC NEILL, THOS PINKNEY, CHATTANOOGA
 MCGHEE, ELAINE KINGAS, HIXSON
 MERCADO, AVELINO VELASCO, CHATTANOOGA
 MEREDITH, GARY EUGENE, CHATTANOOGA
 MICHAEL DOUGLAS MD, CHATTANOOGA
 MICHELSON, MARIE LOUISE, CHATTANOOGA
 MILLER, FRANK J, CHATTANOOGA
 * MILLER, IRVIN S, ALEXANDRIA, VA
 MILLER, PHYLLIS A EDWARDS, HIXSON
 MILLER, ROBT T, CHATTANOOGA
 MILLER, THOMAS P, CHATTANOOGA
 MILLS, DON GILBERT, CHATTANOOGA
 MITCHELL JR, JERRY WAYNE, CHATTANOOGA
 MITCHELL, ALLEN M, CHATTANOOGA
 MOLLOY, RONALD LYNN, CHATTANOOGA
 MONROE, THOS C, CHATTANOOGA
 MONTAGUE, ROBT WRIGHT, CHATTANOOGA
 MOORE, HIRAM BEENE, SOUTH PITTSBURG
 MORGAN, JOHN RONALD, CHATTANOOGA
 MORGAN, RUFUS S, CHATTANOOGA
 MORRIS, BRENT S, CHATTANOOGA
 MORROW III, SANFORD H, CHATTANOOGA
 MOSES, THOMAS EDWARD, CHATTANOOGA
 MOSS, WM JOEL, CHATTANOOGA
 MULLADY III, THOMAS F, CHATTANOOGA
 * MURPHY JR, FAY B, CHATTANOOGA
 MURRAY, R SMITH, CHATTANOOGA
 MYERS SR, ROBERT W, CHATTANOOGA
 NATHAN, MARVIN MYER, CHATTANOOGA
 NELSON, MERRILL FREDERICK, CHATTANOOGA
 * NEUFELD, RAYMOND O, SOUTH AMERICA
 * NEWELL JR, EDWARD THOS, CHATTANOOGA
 NEWTON JR, PHILIP THOMAS, CHATTANOOGA
 NICHOLS, RURT L, CHATTANOOGA
 NIPP, RALPH ELGIN, CHATTANOOGA
 NOLAN, PAUL VERNON, CHATTANOOGA
 NOONAN, DAVID V, CHATTANOOGA
 NORTON, BARRY PARKER, CHATTANOOGA
 O'NEAL, DAVID MEDFORD, CHATTANOOGA
 ODOM, ALAN C, CHATTANOOGA
 OSMUNDSEN, ROBT N, SIGNAL MOUNTAIN
 OWENS, ARTHUR MELBOURNE, DUNLAP
 OANBY, NORMAN L, SOUTH PITTSBURG
 OZBORN, GEORGE MICHAEL, CHATTANOOGA
 PALLAS, WM CHAS, CHATTANOOGA
 PARANJAP, ARUN R, CHATTANOOGA
 PARK, IH KOO, FT OGLETHORPE, GA
 PARKHURST, WALTER O, CHATTANOOGA
 * PATTERSON, ROBT L, CHATTANOOGA
 PATY JR, JOHN GARLAND, CHATTANOOGA
 PAYNE, STANLEY ROSS, CHATTANOOGA
 PEREZ, MARTIN ALLEN, CHATTANOOGA
 PERKINS, THORNTON DELOS, CHATTANOOGA
 PERRIN, MILLARD FOY, CHATTANOOGA
 PETERSON JR, WALTER A, CHATTANOOGA
 PETTY, WESLEY GLENN, CHATTANOOGA
 PHLEGAR, ROBERT F, CHATTANOOGA
 PICKETT, JAMES CLARKE, CHATTANOOGA
 POEHLEIN, RICHARD ERIC, HIXSON
 POLLOCK, PHILLIP GARY, CHATTANOOGA
 PORTERA, CHARLIE ANTHONY, CHATTANOOGA
 POTDAR, ANILKUMAR S, CHATTANOOGA
 PRICE, WM HOUSTON, CHATTANOOGA
 PUCKETT III, WALTER, CHATTANOOGA
 QUILLIAN, JESSE O, CHATTANOOGA
 QUILLIAN, JOE ANNE, CHATTANOOGA
 QUINN, JAMES GILBERT, CHATTANOOGA
 RAMSAY, GEORGE CRAIG, SOUTH PITTSBURG
 RAMSEY, JAMES O, CHATTANOOGA
 RAMSEY, MILLARD WRAY, HIXSON
 RAO, G S, CHATTANOOGA
 RAWLINGS JR, MAURICE S, CHATTANOOGA
 RAWLINGS SR, MAURICE S, CHATTANOOGA
 RAY, CHAS JACKSON, CHATTANOOGA
 * RECORD, WM DAVID LEO, CHATTANOOGA
 REDDY, SUDHAKAR K, CHATTANOOGA

REYNOLDS, JAMES EUGENE, CHATTANOOGA
REYNOLDS, JOHN ROBT, CHATTANOOGA
RHOTON, ALEXANDER, CHATTANOOGA
RICH, JOHN STEPHEN, HIXSON
RICHMOND, KENNETH C, CHATTANOOGA
RISSLING, OELORIS E, CHATTANOOGA
RITTENBERRY JR, ANDREW B, CHATTANOOGA
* ROBERTS JR, GILBERT M, BOCA RATON, FL
* RODGERS, JAMES JACOB, DAYTON
ROGERS, ALFRED PERKINS, CHATTANOOGA
RUWE, WM EDWARD, CHATTANOOGA
ROWELL, ESPERANZA A, CHATTANOOGA
ROYAL, JAMES RICHARD, CHATTANOOGA
RUFFNER JR, B WINFRED, CHATTANOOGA
RUSSELL, DON JERE, CHATTANOOGA
RUSSELL, WM LEE, CHATTANOOGA
RYAN, EUGENE MONTFORD, SOUTH PITTSBURG
SANTOS, BENJ G, CHATTANOOGA
SCHEINBERG, MARTY, CHATTANOOGA
SCHMITS, G MICHAEL, CHATTANOOGA
SCHWARTZ, HAROLO ALAN, CHATTANOOGA
SCOTT JR, EDGAR LEONARD, CHATTANOOGA
SEAL, MOLLY ELAINE ROGERS, CHATTANOOGA
SEITERS JR, GEORGE Z, CHATTANOOGA
SELZER, JERROLO LEE, CHATTANOOGA
SEMAN, CHARLES FREDERICK, CHATTANOOGA
SENDELE, DEBORAH O, CHATTANOOGA
* SHAW, CLARENCE, CHATTANOOGA
SHELDON, GEO WASHINGTON, CHATTANOOGA
SHENOUDA, ADEL NEMR, CHATTANOOGA
* SHERIDAN, WM JOS, CHATTANOOGA
SHERRELL, JAMES WM, CHATTANOOGA
SHERRILL, LEROY, CHATTANOOGA
SHUCK III, EDWIN H, CHATTANOOGA
SHUCK JR, EDWIN H, CHATTANOOGA
SHULL, JOHN A, CHATTANOOGA
SIENKNFCHT, CHAS WILLSON, CHATTANOOGA
SIVILS, GEO LETE, CHATTANOOGA
SMARTT, WALTER HAINES, RISING FAWN, GA
SMILEY, FRANCIS J, FT OGLETHORPE, GA
SMITH III, ARCHIBALD Y, SIGNAL MOUNTAIN
* SMITH JR, MOORE JACKSON, CHATTANOOGA
SMITH, STEVEN ALLAN, CHATTANOOGA
SMITH, STEWART PHILLIP, CHATTANOOGA
SNYDER JR, PAUL EDGAR, CHATTANOOGA
SOTERES, PETE SPIROS, CHATTANOOGA
SOTONG, PHILLIP CURTIS, SIGNAL MOUNTAIN
SPALDING, ROBT TUCKER, CHATTANOOGA
SPAULDING JR, JAMES H, SIGNAL MOUNTAIN
STAFFORD, FLORENCE E, CHATTANOOGA
STAHL, NORMAN LEE, CHATTANOOGA
STANKO, JAMES A, CHATTANOOGA
STAPPENBECK, RICHARD F, CHATTANOOGA
* STARR, HAROLO JONES, CHATTANOOGA
* STEELE JR, WILLARD HINOS, LOOKOUT MTN
* STEM, WM ALLISON, CHATTANOOGA
STERNBERG JR, W CHAS A, CHATTANOOGA
STICKLEY, JOS HAROLD, CHATTANOOGA
STOHLER, DENNIS L, CHATTANOOGA
STONE, HARRY ALFRED, CHATTANOOGA
STONE, LARRY DUMAS, CHATTANOOGA
STONE, PHILLIP S, CHATTANOOGA
STONEBURNER, WESLEY H, CHATTANOOGA
STRICKLAND JR, JOHN E, CHATTANOOGA
STRIKER, WM KENDALL, CHATTANOOGA
STROUD, MARY E THOMPSON, CHATTANOOGA
SUGGS III, CHARLES L, CHATTANOOGA
SUGGS JR, CHAS L, CHATTANOOGA
SWANN JR, NAT H, CHATTANOOGA
SWIFT, CHAS RAY, CHATTANOOGA
SZCZUKOWSKI, MYRON J, CHATTANOOGA
TAYLOR JR, VISTON, SOUTH PITTSBURG
TAYLOR, GEO N, CHATTANOOGA
TAYLOR, ROBT CRESTON, SIGNAL MOUNTAIN
TEJANI, SUSHILA N, CHATTANOOGA
TEMLOCK, ARTHUR A, CHATTANOOGA
TEMPLETON, THOMAS S, CHATTANOOGA
TEPLEY, LYNN B, CHATTANOOGA
TEPPER, BERNARD, CHATTANOOGA
TEPPER, DAVID JONATHAN, CHATTANOOGA
TEPPER, JACK, CHATTANOOGA
THOMAS, STEVEN MICHAEL, CHATTANOOGA
THOMPSON, PAUL C, CHATTANOOGA
THOMSON, DORIS KRULL, CHATTANOOGA
THORNER, DONALD R, CHATTANOOGA
TIN, PE THAN, CHATTANOOGA
TURNER, DAVID HERSCHEL, CHATTANOOGA
TURNER, SHARLINDA B, CHATTANOOGA
ULIN, A STEVEN, CHATTANOOGA
ULIN, DAVID M, CHATTANOOGA
ULIN, LOUIS, CHATTANOOGA
UTAOEJ, BANCHOB, CHATTANOOGA
* VAN ORDER, WM EDGAR, CHATTANOOGA
VANCE, MINNIE RATLIFF, CHATTANOOGA
VANDERBILT, DOUGLAS L, CHATTANOOGA
VARNER, JAMES W, CHATTANOOGA
VECHINSKI, THOMAS O, CHATTANOOGA
VIETH, ROGER GORDON, CHATTANOOGA
VILLALOBOS JR, ROBERT L, CHATTANOOGA
VLASIS, GUS JOHN, CHATTANOOGA
VON CANNON, CHARLES H, CHATTANOOGA
VON WERSOWETZ, A J, CHATTANOOGA
WADE, MERVIN ALVIN, DECATUR
WAOLEY, FREDIA G STOVALL, CHATTANOOGA
* WALTON, HARRY LEE, LOOKOUT MTN
WEATHERS JR, WM, CHATTANOOGA
WEILER, SANFORD L, HARLAN, KY
* WESTERMAYER, MARION W, CANDLER, NC
WHELOCK, ARGIL JERRY, CHATTANOOGA

* WHITAKER JR, L SPIRES, CHATTANOOGA
WHITE, PHIL JOE, CHATTANOOGA
WHITE, WILLIAM OTIS, CHATTANOOGA
WHITELAW JR, ROBERT S, CHATTANOOGA
WILLIAMS III, SAM JONES, CHATTANOOGA
WILLIAMS JR, JESSE L, CHATTANOOGA
WILLIAMS, RICHARD BRUCE, CHATTANOOGA
WILLIAMS, ROBERT HENRY, CHATTANOOGA
WILLINGHAM JR, WINFRED B, CHATTANOOGA
WRIGHT JR, KINSMAN E, CHATTANOOGA
YIUM, JACKSON JOE, CHATTANOOGA
YOOD, JULIAN MACON, CHATTANOOGA
YOUNG, GEO G, CHATTANOOGA
YOUNG, LAWRENCE I, CHATTANOOGA
ZUCKERMAN, JOS I, CHATTANOOGA

COCKE COUNTY MEDICAL SOCIETY

GARBARINO JR, A J, NEWPORT
HDOO, MICHAEL T, NEWPORT
LUCKTONG, DONLUA, NEWPORT
MCCONNELL, DAVID H, NEWPORT
SHULTS, GLEN C, NEWPORT
SIM, JEA WOOD, NEWPORT
TAUBE, TITUS A, NEWPORT
VALENTINE JR, FRED M, NEWPORT

COFFEE COUNTY MEDICAL SOCIETY

BATTAGLIA, EO L, TULLAHOMA
BENNETT, CHARLES V, TULLAHOMA
BRICKELL JR, RALPH L, TULLAHOMA
CANON, ROBT MAURICE, TULLAHOMA
FARRAR, CLARENCE H, MANCHESTER
FARRAR, HOWARD A, MANCHESTER
FRALBY, MARVIN CLIFFORD, TULLAHOMA
GALBRAITH, BRUCE E, TULLAHOMA
GRAY JR, EDWIN E, TULLAHOMA
HARVEY, CHAS BEN, TULLAHOMA
KENNEDY, JERRY LEONARD, TULLAHOMA
KIM, HD KYUN, TULLAHOMA
* KING, JAMES MANNING, TULLAHOMA
KRISHNA, GULLA BALA, TULLAHOMA
MARSH, CHAS WALLACE, TULLAHOMA
MILAM, WILLIAM M, TULLAHOMA
RIDLEY, ROBERT WENDALL, TULLAHOMA
* ROLDS JR, EARL E, TULLAHOMA
SANDERS IV, WILLIAM J, TULLAHOMA
SHUKLA, SANDIP, TULLAHOMA
SNODDY, CLAUDE COLLINS, TULLAHOMA
VALLEJO, FRANCISCO C, TULLAHOMA
VALLEJO, LUZ A, TULLAHOMA
WEBB, CHAS HARRY, TULLAHOMA
WOODFIN JR, MOSE CLARKE, TULLAHOMA
YANG, HARRISON Y, MANCHESTER
YOUNG, COULTER SMARTT, MANCHESTER
YU, JA NAN, MANCHESTER

CONSOLIDATED MEDICAL ASSEMBLY OF WEST TENNESSEE

ALEXANDER, CLYDE VINSON, JACKSON
APPLETON JR, JAMES ROY, JACKSON
ARISTORENAS, JUAN T, ADAMSVILLE
ARMSTRONG, JOHN L, SOMERVILLE
ATKINS, JERRY FRANKLIN, HUNTINGDON
* BAKER, LT CL JOHN Q, MESA, AZ
BALLARD, THOS K, JACKSON
BARHAM, HARVEY HAYWOOD, BOLIVAR
BARKER, JAMES HARRIS, JACKSON
BARNES JR, JAMES WALTER, JACKSON
BARNETT II, HUGH GLENN, JACKSON
BARNETT, ROBT J, JACKSON
BHAT, NARAYANA B, HUNTINGDON
BICKNELL, SIOENEY LANE, JACKSON
BISHOP, JOHN MYRON, SOMERVILLE
BLANKENSHIP JR, H, SAVANNAH
BONO JR, ELIAS KING, JACKSON
BOOTH, JACK H, JACKSON
BROWN II, JOE LAWRENCE, JACKSON
BROWN, JANE L WARNE, JACKSON
BURNETT, WILLIAM FRANKLIN, JACKSON
BURRUS JR, SWAN, JACKSON
* BURRUS SR, SWAN, JACKSON
* CHANDLER, JOHN H, JACKSON
* CHAPMAN, T C, BROWNSVILLE
CHARY, KANDALA RAM, JACKSON
CHURCHWELL, A GRIGG, SAVANNAH
COUCH, BILLY LANIER, HUMBOLOT
COX, CHAS WM, JACKSON
CRAIG JR, JAMES THOMAS, JACKSON
CRAIG, STERLING RUFFIN, JACKSON
CRENSHAW, JAMES HARRIS, HUMBOLOT
CRENSHAW, THOS MALCOLM, HUMBOLOT
CROCKER, EDWARD F, JACKSON
CROOK, WM GRANT, JACKSON
CURLIN, JOHN PASCHAL, JACKSON
DE SOUZA, WM CELESTINO, RUTHERFORD
DENNEY, SAM J, MILAN
DICKSON, KENNETH L, BROWNSVILLE
DINKINS, RUTH ELEANOR, JACKSON
DOOSON JR, GEO DAY, JACKSON
DONNELL, JAMES HAROLD, JACKSON
DOUGLASS JR, ROY A, JACKSON
* DOUGLASS, JACK E, JACKSON
DOWLING, CLAREY R, BROWNSVILLE
DRIVER, CLARENCE, JACKSON
DUBRULF, RDSAIRE M, JACKSON
DUNAVANT, ROBT WAYNE, BOLIVAR
DUNNEBECKE, ROBERT H, JACKSON
DUVAL JR, J WILLIAM, JACKSON
EDWARDS, EDWIN WILTZ, JACKSON
EDWARDS, GEORGE T, JACKSON
EDWARDS, NICHOLAS HENRY, GRAND JUNCTION
ELLIS, JOHN W, TRENTON
EMERSON, BLANCHE S, JACKSON
EPPS, JOHN MICHAEL, JACKSON
ERB, BLAIR D, JACKSON
FENLEY JR, JAMES L, JACKSON
FIELDS, JAMES O, MILAN
* FITTS, WILLIAM T, GREEN VALLEY, AR
FOSTER, CHAS STEPHEN, JACKSON
FRIFOMAN, FRED M, JACKSON
FROST, CHAS LESTER, BOLIVAR
GARRAKO JR, CLIFFORD L, JACKSON
GRANT, WILLIAM M, MC KENZIE
GRAVES, OLIVER HALDUM, JACKSON
GRAY, ALDEN HARRELSON, KENTON
HALE, BOBBY DEE, BROWNSVILLE
* HALL, JAMES WILSON, TRENTON
HALL, ROBT CROMBIF, JACKSON
HAMMOND, JERE D, JACKSON
HAMMOND, STEPHEN, JACKSON
HARRISON, WALTON W, JACKSON
HAWKINS JR, RAYMOND, SOMERVILLE
HAZELHURST JR, GEORGE E, JACKSON
HERRON, BRUCE FMERSON, JACKSON
HERRON, CHAS BURKHEAD, JACKSON
HICKMAN, CHAS NORRIS, TRENTON
HICKS, ALVIN THORNTON, CAMDEN
HIGGS, BOBBY CLARK, JACKSON
HILL, ROBT S, JACKSON
HOLMES, CHESTER L, TRENTON
HOLMES, JAMES THOBURN, MC KENZIE
HONEYCUTT, DANIEL LEE, JACKSON
HORTON, ROBT LESLIE, CAMDEN
HOUSE, BEN FRED, JACKSON
HUBBARD, GEO BAKER, JACKSON
HUMPHREY, TOM NEAL, SELMER
HUMPHREYS, T JAMES, JACKSON
* JOHNSTON, LELAND MANN, JACKSON
JONES JR, WESLEY F, LEXINGTON
JONES, KENT L, JACKSON
* JONES, PAUL D, MILAN
KEE, JIMMY W, JACKSON
* KEETON, ROBERT T, BRUCETON
KENOALL, JOHN ALLEN, JACKSON
KING, DARREL CHAMBERS, HENDERSON
KODNCE, DUVAL HOLTZCLAW, JACKSON
LA FONT, DONALD SHARP, JACKSON
LANE, JAMES DAVISON, JACKSON
LANGOON JR, JAMES A, JACKSON
LARSEN, DAVID MALCOLM, JACKSON
LAY, JOHN DANL, SAVANNAH
LEWIS, DONALD RAY, JACKSON
LOWRY, MAURICE NEILL, LEXINGTON
MALEY, BRUCE B, JACKSON
MANOLE, ROBT BENNIE, JACKSON
MAYFIELD, RUSSELL W, BELLS
MC ADD, MICHAEL A, MILAN
MC AFFE, WM CLEVELAND, JACKSON
MC CALLUM, OSCAR M, HENDERSON
MC IVER, HAROLO THOMAS, JACKSON
MC KNIGHT, FRANK S, SOMERVILLE
MCCRUIDEN, BRIAN F, JACKSON
MCOOWELL, L JANE, JACKSON
MIDDLETON, AUGUSTUS L, JACKSON
MILLER JR, JESSE A, JACKSON
MOORE, MARSHA B, SELMER
* MORRIS, JOHN WALLER, SOMERVILLE
* MORRIS, ROBERT H, MEDINA
MUELLER, ALFRED J, JACKSON
MYHR, LAMB BOLTON, JACKSON
PAKIS JR, GEORGE, JACKSON
PALMER JR, EDMUND T, JACKSON
PARKS, FRANK O, JACKSON
PATEL, HASMUKH DAHYABHAI, TRENTON
PEELER, HARRY LEE, SELMER
PENNINGTON, FRANK R, JACKSON
PHILLIPS, JAMES ALFRED, JACKSON
PLEMMONS, LLOYD HAROLD, SOMERVILLE
PORTIS, BILL SCOTT, HUNTINGDON
PRICE JR, JAMES ALFRED, JACKSON
RAMER JR, WARREN CARLTON, LEXINGTON
RAMER SR, WARREN C, LEXINGTON
RAO, GAOE, SAVANNAH
REESE, EUGENE P, JACKSON
RHEA, KARL BYINGTON, SOMERVILLE
RHEAR, RAYMOND WAYNE, ALAMO
RICHARDS, AUBREY, WHITEVILLE
RIDOLER, JOHN GARTH, JACKSON
ROBBINS, RUSSELL HUGH, JACKSON
ROBERT F DORLON JR MO, JACKSON
ROBERTS, WM H, JACKSON
ROBERTSON, JAMES H, MCKENZIE
ROE, THOS VANCE, SAVANNAH
ROUTON, WILLIAM ROBERT, HUMBOLOT
ROUTT JR, WILLIAM E, MEMPHIS
ROWLAND, JOS PERRY, JACKSON
RUSH JR, LEE, SOMERVILLE
SCHLAMP, ALLEN LEE, JACKSON
SCOTT, AUGUSTUS BARNETT, JACKSON
SHANNON, GEO WM, JACKSON
SHARPE JR, BENJ WEEKS, JACKSON

SHAW JR, JOHN L, JACKSON
 SHEPPARD JR, LEE C, JACKSON
 SMELSER, MICHAEL HARDING, ADAMSVILLE
 SMITH JR, MONTIE E, SELMER
 SMITH, CLYDE E, JACKSON
 SMITH, HARRIS L, JACKSON
 SMITH, JAMES HAGY, SELMER
 SMITH, ROBT JOS, JACKSON
 SODDER, BOB TYLER, JACKSON
 SPENCER, DONALD R, BROWNSVILLE
 SPRUILL JR, JAMES HENRY, JACKSON
 STAUFFER, CHAS C, JACKSON
 STEPP JR, WILLIAM P, JACKSON
 STEWART, DAVID EARL, BROWNSVILLE
 STONECIPHER, LOWELL F, JACKSON
 STORY, WILLIAM CHARLES, JACKSON
 STRIPLING, JACK CLEMENTS, LEXINGTON
 SUMMAR, ALVIN JONAH, PARIS
 SWINDLE, JAMES TYLER, JACKSON
 * TATE, J KNOX, BOLIVAR
 THOMAS, GEO EMANUEL, JACKSON
 THOMAS, HOWARD W, SAVANNAH
 THOMAS, JAMES HOWARD, SAVANNAH
 THOMAS, JAMES LOUIS, JACKSON
 * THOMPSON JR, JOHN ROBT, JACKSON
 THORNTON JR, JOHN C, BROWNSVILLE
 TILLMAN, RONALD C, JACKSON
 * TRUEX, S ALLEN, JACKSON
 TUCKER JR, ROBT TAYLOR, JACKSON
 TWILLA, RONALD G, MILAN
 VEGORS, ROBERT A, JACKSON
 VINSON, HAROLD WALLACE, SELMER
 WALKER JR, SHERLIE STONE, MC KENZIE
 WARMBROD JR, JAMES G, JACKSON
 WEBB, JIMMY FRANKLIN, JACKSON
 WELLES III, EDWARD HUNTER, JACKSON
 WHITAKER JR, HOWARD W, SAVANNAH
 WHITE, CHARLES WESLEY, LEXINGTON
 WHITE, JERALD WAYNE, BROWNSVILLE
 WHITE, LAMAR ARTHUR, FRIENDSHIP
 WILLIAMS JR, ALLEN N, BEMIS
 WILLIAMS, JAMES HENRY, MILAN
 WILLIAMS, JAMES LARRY, TRENTON
 WILLIAMS, PHILIP GRAY, MILAN
 WILLIAMS, RICHARD LARRY, JACKSON
 WILLIAMSON JR, FELIX E, JACKSON
 WILLIAMSON, JAMES STEPHEN, HUNTINGDON
 WILSON, R L, HENDERSON
 WILSON, ROBT BURTON, HUNTINGDON
 WINKLER, VOLKER GERT, MCKENZIE
 WOLFE, WAYNE HARVEY, JACKSON
 WOODS, ARTHUR M, JACKSON
 WYATT, GEO BRECKENRIDGE, JACKSON
 * WYLLIE, PAUL EVE, JACKSON
 YARBRO, HAROLD R, JACKSON

CUMBERLAND COUNTY MEDICAL SOCIETY

BARNAWELL, JAMES ROSS, CROSSVILLE
 BAYLOSIS, ROBERTO B, CROSSVILLE
 BELL, CHRISTOPHER M, CROSSVILLE
 BILKREY, RICHARD LEE, CROSSVILLE
 BISE, STANLEY L, CROSSVILLE
 BUNNDS, CHARLES P, PIKEVILLE
 BWAUN, RICHARD C, CROSSVILLE
 CALLIS, JAMES TAYLOR, CROSSVILLE
 CAMPBELL JR, JAMES T, CROSSVILLE
 CAMPBELL, DAVID EDWARD, CROSSVILLE
 CLARK, JACK CROWLEY, CROSSVILLE
 CRAVENS, R GENE, CROSSVILLE
 CRICK, JAMES M, CROSSVILLE
 DEATHERAGE, PHILIP M, CROSSVILLE
 * DOUGHERTY, JOHN H, FAIRFIELD GLADE
 DUER, CARL THOS, CROSSVILLE
 DURHAM, BEATRICE L, CROSSVILLE
 ERVIN JR, PAUL A, CROSSVILLE
 EVANS, WM ELKINTON, CROSSVILLE
 HALL, DANNY, CROSSVILLE
 IVEY, DONATHAN MILES, CROSSVILLE
 IVEY, R DONATHAN, CROSSVILLE
 KOUCHKEI, MOHAMMED, CROSSVILLE
 LINDSAY, JACK WASSON, ROCKWOOD
 LITCHFORD, DAVID WILLIAMS, CROSSVILLE
 MONAGHAN, T GAVIN, CROSSVILLE
 MUNSON, FREDERICK WM, CROSSVILLE
 OLACHEA, REINALDO A, CROSSVILLE
 REED, LARRY UELWAYNE, CROSSVILLE
 ROBERTSON, JUS O, CROSSVILLE
 * SEATON, STUART P, CROSSVILLE
 WALLACE, JOE KENNETH, CROSSVILLE
 WOOD JR, ROBT HANCOCK, CROSSVILLE

DeKALB COUNTY MEDICAL SOCIETY

ABROTT II, KENNETH H, SMITHVILLE
 BLEVINS, MELVIN LEE, SMITHVILLE
 CRIPPS, HUGH DONN, SMITHVILLE
 DARRAH, DAVID EDWARD, ALEXANDRIA
 FLOODKE, STEPHEN LAWRENCE, SMITHVILLE
 TWILLA, JOHN KENNETH, SMITHVILLE

DICKSON COUNTY MEDICAL SOCIETY

ANDERSON, STANLEY MARTIN, DICKSON
 BELL III, WALTER A, DICKSON
 BELL JR, WALTER A, DICKSON

BLEVINS, JERRY C, DICKSON
 COLLINS, CLYDE E, DICKSON
 * COOK, MARY BAXTER, CHARLOTTE
 DRINNEN, DANL BROOKS, DICKSON
 ELLIOTT JR, JAMES C, CHARLOTTE
 GORDON, JEFFREY, DICKSON
 HAYES, PHILLIP WALTON, DICKSON
 JACKSON, JAMES T, DICKSON
 JACKSON, JAMES W, DICKSON
 KALEY, JACK STRAUDE, CHATTANOOGA
 MAHAN, MARCELLE, DICKSON
 SALTER, JOHN R, DICKSON
 SMITH, BOBBY JOEL, DICKSON
 THUAN, ROBT PHAM NGOC, DICKSON
 WISER, ELUREU HOUCK, DICKSON

FENTRESS COUNTY MEDICAL SOCIETY

ALLRED, BAILEY FRED, JAMESTOWN
 JUSHI, OILIP N, JAMESTOWN
 SMITH, JACK CALVIN, JAMESTOWN
 SMITH, R DOUGLAS, JAMESTOWN
 TURNER, SHELBY OSCAR, CLARKRANGE

FRANKLIN COUNTY MEDICAL SOCIETY

ANDERTON, JO CARTER, WINCHESTER
 BAGBY JR, RICHARD A, WINCHESTER
 BARTON, ROBERT K, SEWANEE
 ECKLES, GEORGE, WINCHESTER
 * FITE, ARTHUR R, WINCHESTER
 FORT JR, DUDLEY CLARK, WINCHESTER
 * HANNIFIN, JAMES, MONTEAGLE
 HARCY, PETER, WINCHESTER
 HOLLIMAN, JAMES D, WINCHESTER
 HODD, DEWEY WOODROW, DECHERO
 HUPKINS, G DAVID, SEWANEE
 HURBARO, KEX, WINCHESTER
 JOHNSON, GERALD EUGENE, WINCHESTER
 KENNEDY, FLAINE, WINCHESTER
 KEEPLER, CHAS B, SEWANEE
 LEONARD, RUSSELL J, SEWANEE
 * LITTLE III, JOSEPH A, MURFREESBORO
 SMITH, THOMAS ANDERSON, WINCHESTER
 STENSBY, JAMES G, WINCHESTER
 STOCKTON, DAVID L, WINCHESTER
 STOCKTON, M DAVID, SEWANEE
 STUART, FLETCHER SLOCUMB, WINCHESTER
 THROWER, WENDELL HUPTON, SEWANEE
 VAN BLARICUM, JAMES, WINCHESTER
 VILLAR, RODOLFO, WINCHESTER
 * WAY, ROGER ATKINSON, SEWANEE
 ZIMMERMAN, THOMAS E, WINCHESTER

GILES COUNTY MEDICAL SOCIETY

AGEE, ROBT B, PULASKI
 AL AGHA, MOUAMED WALID, PULASKI
 BURGER, CHARLES W, PULASKI
 DAVIS JR, BUFORD PRESTON, PULASKI
 FENTRESS, J VANCE, PULASKI
 FURONDA, ARMANDO CARDT, PULASKI
 * JOHNSON, WALTER JOE, PULASKI
 MURKEY, WM HARWELL, PULASKI
 OWEN, WM KENORICK, PULASKI
 RASCHE, ANNE M, PULASKI
 RASCHE, RICHARD ALBERT, PULASKI

GREENE COUNTY MEDICAL SOCIETY

AASHEIM, RICHARD J, GREENEVILLE
 AUSTIN JR, JOSEPH W, GREENEVILLE
 AUSTIN, MAYNARD WADE, GREENEVILLE
 AZARET, RAMON RAFAEL, GREENEVILLE
 BARNES, LLOYD ROGERS, GREENEVILLE
 BEAN, MICHAEL WM, GREENEVILLE
 BECKNER III, THOS FOLSON, GREENEVILLE
 BROWN, ISAAC O, MOSHEIM
 CHAPMAN JR, WALTER CLAY, GREENEVILLE
 CORBLE, DOUGLAS CATRON, GREENEVILLE
 COLE, RONALD ARTHUR, GREENEVILLE
 * COOLIDGE, LEROY E, WILLOWOOD, GA
 CUMPER, ROBT ATLEE, GREENEVILLE
 COWLES JR, ROBT S, GREENEVILLE
 EASTERLY JR, JAMES F, GREENEVILLE
 ELLENBURG JR, LUKE LAMAR, GREENEVILLE
 * ELLENBURG, LUKE L, GREENEVILLE
 * EVANS, GRAYDON RAUER, MOSHEIM
 FLOHR, ROBERT STEPHEN, GREENEVILLE
 * FOX, HASKELL W, GREENEVILLE
 * GIBSON, RAE B, GREENEVILLE
 GILES, STANLEY A, GREENEVILLE
 HENARD, CARTER HAL, GREENEVILLE
 HOPPE, GORDON PAUL, GREENEVILLE
 HURNER, NATHAN P, GREENEVILLE
 KEEBLER, BEN JENNINGS, GREENEVILLE
 MARSA, GORDON L, GREENEVILLE
 MASON, WALTER LAWRENCE, GREENEVILLE
 MATHEWS JR, KENNETH M, GREENEVILLE
 MATHIESSEN JR, K MAPLIN, GREENEVILLE
 * MC COLLUM, HASKELL R, GREENEVILLE
 MC KINNEY, JAMES RAY, GREENEVILLE
 METCALF III, DEE LAMAR, GREENEVILLE
 MORRIS, JOHN N, GREENEVILLE

NOVINGER, GEORGE T, GREENEVILLE
 ODELL, MICHAEL J, GREENEVILLE
 OWEN, GEO WESLEY, GREENEVILLE
 PATTERSON, DAVID OSCAR, GREENEVILLE
 * REVIERE, CALVIN BARTON, GREENEVILLE
 RODGERS, JAMES STEVEN, GREENEVILLE
 SHAW, JOHN LEWIS, GREENEVILLE
 SHEAD, WILLIAM J, GREENEVILLE
 STANLEY III, RICHARD E, GREENEVILLE
 STRANGE, E BRAD, GREENEVILLE
 STRIMER, ROBERT M, GREENEVILLE
 SUSONG, KENNETH CLARK, GREENEVILLE
 THACKER, WM CARL, GREENEVILLE
 WEBSTER, THOS MOORE, GREENEVILLE

HAWKINS COUNTY MEDICAL SOCIETY

BATRO JR, RENFRO B, ROGERSVILLE
 COLE, ALAN R, ROGERSVILLE
 GAMBREL, RALPH, ROGERSVILLE
 * HENDERSON, EDWARD M, ROGERSVILLE

HENRY COUNTY MEDICAL SOCIETY

ADAMS, ROBT O, PARIS
 CAMPBELL, WM RUSSELL, PARIS
 GARRETT, GLENN SANDERS, PARIS
 GRIFFEY JR, WALTER P, PARIS
 * GRIFFEY, WALTER PLUMMER, BUCHANAN
 HARRISON, TERRY, PARIS
 HOWELL SR, IRVIN W, PARIS
 * JONES, ISAAC HOOPER, PARIS
 MC CASKILL JR, SAM, PARIS
 MC INTOSH, BARRY PARK, PARIS
 MURLEY JR, EMMETT P, PARIS
 MURLEY, JOE D, PARIS
 NEUMANN SR, JOHN E, PARIS
 NORMAN, DWIGHT MICHAEL, PARIS
 PASCHALL, ROBERT T, PARIS
 RHEA SR, WM GARDNER, PARIS
 ROBERTSON, JAMES BUFORD, PARIS
 ROSS, KENNETH GUYSTEAU, PARIS
 SENTER JR, JOHN MAXWELL, PARIS
 SLEADO, FRANK BLAND, PARIS
 * SMITH, JOS RAY, PARIS
 TUSA, VINCE CHAS, PARIS
 VAN DYCK, JOHN, PARIS
 WOOD, THOS CHAS, PARIS

JACKSON COUNTY MEDICAL SOCIETY

DOONEY, ELIJAH MORGAN, GAINESBORO

KNOXVILLE ACADEMY OF MEDICINE

AABY, GENE VICTOR, KNOXVILLE
 * ABSHER, LEE A, KNOXVILLE
 ACKER JR, JOS E, KNOXVILLE
 ACKER, JAMES JOS, KNOXVILLE
 ACUFF, WM JOS, KNOXVILLE
 * AKIN, ROBT LOUIS, KNOXVILLE
 AMHROSE, PAUL SEABROOK, KNOXVILLE
 ANDERSON, THOMAS I, KNOXVILLE
 ANDREWS, EDMUND B, KNOXVILLE
 ANGE, CHAS GILMER, KNOXVILLE
 ANGE, DAVID WESTLEY, KNOXVILLE
 ARNOLD JR, HENRY GRADY, KNOXVILLE
 AVERA, JOHN W, OAK RIDGE
 AVERY, REBE ANNE BASS, KNOXVILLE
 AVERY, ROBERT BRUCE, KNOXVILLE
 AVERY, SHIRLEY BANNISTER, KNOXVILLE
 BAILEY JR, WM ROSS, KNOXVILLE
 BAKER JR, MARTIN ROSS, KNOXVILLE
 BALLOU, GORDON STEELY, KNOXVILLE
 BANKSTON, FLOYD N, KNOXVILLE
 BARNES, ROBT LUTHER, KNOXVILLE
 BARNETT, CHARLES F, KNOXVILLE
 BEAHM, WALTER CLARENCE, KNOXVILLE
 BEALS, DANL FRANKLIN, KNOXVILLE
 BEALS, JOE DUNCAN, KNOXVILLE
 BEASLEY, ALFRED DURANT, KNOXVILLE
 BEASLEY, J FRANK, KNOXVILLE
 BECKER, JAMES E, KNOXVILLE
 BEELER, T CRAIG, KNOXVILLE
 BEENE, THOS KEITH, KNOXVILLE
 BELL, JAMES BOWERS, SEYMOUR
 BELL, JOHN HENRY, KNOXVILLE
 * BELL, SPENCER Y, KNOXVILLE
 BELLAMY, BRUCE B, KNOXVILLE
 BENEDICT, WALTER HANFORD, KNOXVILLE
 BENHAYDON, JACK, KNOXVILLE
 BENTON, JAMES CARL, KNOXVILLE
 BIGGS, ALBERT W, KNOXVILLE
 BIGGS, MONTE BRUCE, KNOXVILLE
 BIRDWELL, DAVID ALLEN, KNOXVILLE
 BISHOP JR, ARCHER W, KNOXVILLE
 BISHOP, HARRY LOUIS, KNOXVILLE
 BLACK JR, JOE WM, KNOXVILLE
 * BLACK, CHAS W, KNOXVILLE
 BLACK, WILLIAM D, KNOXVILLE
 BLACK, CORRIE, LOUDON
 BLAKE, HU AL, KNOXVILLE
 BLAKE, LYNN FRENCH, KNOXVILLE
 BLOSSOM, GERALD LEE, KNOXVILLE

BUGARTZ, LEON JACOB, KNOXVILLE
BOOHER, ROBERT W, LOUISVILLE
BOST, WM EUGENE, KNOXVILLE
BOSWELL, WADE H, KNOXVILLE
BRABSON, LEONARD ALLISON, KNOXVILLE
BRAOSHER JR, JACOB T, KNOXVILLE
BRAILEY, RICHARD F, KNOXVILLE
BRANSON, AUBRA DAVID, KNOXVILLE
* BRASHEAR, ROBT G, KNOXVILLE
BRIMI, ROBT JOHN, KNOXVILLE
BRINNER, RICHARD A, KNOXVILLE
BRITT, JAMES CLOYE, KNOXVILLE
BROADY, JOS LEROY, KNOXVILLE
BROOKS, ROBT T, KNOXVILLE
BROWN JR, FREDERICK F, KNOXVILLE
BRYAN, RONALD WM, KNOXVILLE
BRYSON, ANDREW LAIRD, KNOXVILLE
BUNN, RAYMOND CLOYD, KNOXVILLE
BURGIN, JAMES B, KNOXVILLE
BURKHART, JAMES M, KNOXVILLE
BURKHART, JOHN H, KNOXVILLE
BURKHART, JOHN MCCLAIN, KNOXVILLE
BUSHKELL, LAWRENCE K, KNOXVILLE
BUSHORE, JOHN THOS, KNOXVILLE
BUSHORE, MARTHA J SMITH, KNOXVILLE
BYRO, WM GEO, KNOXVILLE
CAMPBELL JR, JOHN E, KNOXVILLE
CAMPBELL, JOHN WILSON, KNOXVILLE
CAMPBELL, MORRIS DEAN, KNOXVILLE
* CAROWELL, PAUL H, KNOXVILLE
CARLOMAGNO, OSCAR MARIO, KNOXVILLE
CARLSON, C SANFORD, KNOXVILLE
CARPENTER, KENNETH R, CONCORD
* CARR, FREDERICK W, KNOXVILLE
CASON, PETER LEE, LOUISVILLE
CATRON, DONALD GIBSON, KNOXVILLE
* CAYLOR, LLOYD G, KNOXVILLE
CHESNEY, JOHN TUCKER, KNOXVILLE
CHESNEY, LUTHER W, KNOXVILLE
* CHRISTENBERRY JR, HENRY E, KNOXVILLE
CHRISTENBERRY JR, K W, KNOXVILLE
CHRISTENBERRY, KENNETH W, KNOXVILLE
* CHRISTIAN, HENRY S, KNOXVILLE
CLOUD, WM WILEY, KNOXVILLE
* COBB, MALCOLM F, CONCORD
COLE, ROBT RELAND, KNOXVILLE
COLLIER JR, ROBT HOYAL, KNOXVILLE
COLLIGAN, JOSEPH F, KNOXVILLE
COLLMANN, IRVING REID, KNOXVILLE
COMAS, FRANK VILANOVA, KNOXVILLE
CONGOON, CHAS C, KNOXVILLE
CONLEY, DEAN RAYMOND, KNOXVILLE
CONNER, EDWARD D, KNOXVILLE
COOPER JR, JOHN HARRISON, KNOXVILLE
CUREY, DAVID ANTHONY, KNOXVILLE
COUGHLIN JR, DENNIS, KNOXVILLE
CUX, JAMES B, KNOXVILLE
CRAVEN, JOHN J, KNOXVILLE
CRAWLEY, ROBERT A, KNOXVILLE
CREUTZINGER, DAVID J, KNOXVILLE
CRUMLEY, JOE C, KNOXVILLE
* CULLUM, JESSE P, KNOXVILLE
DABBS, RANDALL L, LOUISVILLE
DALTON, MORRIS NORTON, KNOXVILLE
DAVISON, ELYNN V, KNOXVILLE
DAVIS, LLOYD CLEVELAND, KNOXVILLE
DAVIS, MARTIN, KNOXVILLE
DE FIORE JR, JOS CHAS, KNOXVILLE
DE LEESE, JOSEPH S, KNOXVILLE
DE LOZIER, JOS B, KNOXVILLE
DE PERSIO, RICHARD J, KNOXVILLE
* DIDDLE, ALBERT W, KNOXVILLE
DILL, STEPHEN H, KNOXVILLE
DUBBINS, WM TODD, KNOXVILLE
DOWD, SHELTON EDWARD, KNOXVILLE
DURSEY, LARRY, KNOXVILLE
DOUGHERTY JR, JOHN H, KNOXVILLE
DOUGHERTY, ROBT EDWARD, KNOXVILLE
DOWNS, JAMES E, KNOXVILLE
DRESSNER, EVELYN EDITH, KNOXVILLE
DUFFY III, RICHARD N, KNOXVILLE
DUFFY, MARY BROCK, KNOXVILLE
DUKES, JAMES B, KNOXVILLE
DUNCAN JR, RAPHAEL H, CONCORD
DUNCAN, ORVILLE JACK, KNOXVILLE
EACHUS, PATRICIA L, KNOXVILLE
EADY, JOHN ALBERT, KNOXVILLE
EARNEST JR, CHAS R, KNOXVILLE
EASTHAM, JEROME F, KNOXVILLE
EBENEZER, C S ALBERT, KNOXVILLE
EISENSTADT, MICHAEL L, KNOXVILLE
ELLENBURG, DONALD T, KNOXVILLE
ELLIOTT, MICHAEL B, KNOXVILLE
ELLIS, ROY C, HARRPGATE
* ELY, JAMES B, KNOXVILLE
EMBRY, JERRY J, KNOXVILLE
ERICKSON, RICHARD JAMES, KNOXVILLE
EVANS, JOHN HAROLD, KNOXVILLE
FARDON, DAVID FAYKEAU, KNOXVILLE
FARRIS, RICHARD KENT, KNOXVILLE
* FAULKNER, FRANK A, KNOXVILLE
FECHER, MARK P, KNOXVILLE
FERGUSON, JAMES V, KNOXVILLE
FILLMORE, GEO EDWARD, KNOXVILLE
FINELLI, ROBERT EDWARD, KNOXVILLE
FINER, GEO HARVEY, KNOXVILLE
FUGLE, RICHARD ALLEN, KNOXVILLE
FUSTER, WM EDWIN, KNOXVILLE
FRAME, BARRY O, KNOXVILLE
FREEMAN, HAROLD O, LENOIR CITY
FREEMAN, COY, KNOXVILLE
FRERE JR, JOHN M, KNOXVILLE
FRY JR, MELLON ALMA, KNOXVILLE
FURR, FRED M, KNOXVILLE
GALLIVAN JR, WM FRANCIS, KNOXVILLE
GALYON JR, FRANK B, KNOXVILLE
GARCIA JR, JOS ISABEL, KNOXVILLE
GARONER, WM HENRY, KNOXVILLE
GARRETT JR, ALBERT S, OAK RIDGE
GEE JR, GEO EDWARD, KNOXVILLE
GENTRY, ROBT HOMER, KNOXVILLE
GEORGE JR, CHAS F, KNOXVILLE
GERKIN, DAVID GEORGE, KNOXVILLE
GIBBS, JAMES VIVIAN, KNOXVILLE
GIBSON, CARL EUGENE, CONCORD
GILBERT, VERNE EPHRAIM, KNOXVILLE
GILBERTSON, ROBT B, KNOXVILLE
GILLESPIE, RICHARD ALLEN, KNOXVILLE
GILLIAM, JOHN H, KNOXVILLE
GILREATH, CATHERINE ANN, KNOXVILLE
GLEAVES JR, JAMES E, KNOXVILLE
GLOVER JR, ABNER M, KNOXVILLE
GOODWIN, CHAS WAYNE, KNOXVILLE
* GOODGE, BAYARD O, CONCORD
GOODLOCK, O STEVENSON, KNOXVILLE
GOUFFON, CHAS ALLEN, KNOXVILLE
GRABEEL, CONRAD LINDSAY, KNOXVILLE
GRAY, FRANK BENTON, KNOXVILLE
GREEN, SOUTHGATE WM, KNOXVILLE
GREENE, JAMES ALLEN, KNOXVILLE
GREESON, GORDON S, KNOXVILLE
GRIEFITH, ROBT CARL, KNOXVILLE
GROSSMAN, ALLAN M, KNOXVILLE
GROVES, ROBERT MC DONALD, KNOXVILLE
GUYTON JR, JAMES R, KNOXVILLE
HAASE JR, THEODORE F, KNOXVILLE
HALL, DON J, KNOXVILLE
HALL, ROBT EDWARD, KNOXVILLE
HAMPTON, BERT ALLAN, KNOXVILLE
HANNA, WAHIO T, KNOXVILLE
HAQ, JAMSHED U, KNOXVILLE
HARAF, FRANK JOS, KNOXVILLE
HARB, JOS W, KNOXVILLE
HARDY, WALTER S E, KNOXVILLE
HARGROVE, RAYMOND LESLIE, KNOXVILLE
HARPER, KENNETH ALLEN, KNOXVILLE
HARRIS, ROBT WAYNE, KNOXVILLE
HARRISON, SAML A, LOUDON
HARRISON, WM BLAIR, LOUDON
HATHAWAY JR, JOS CHAS, KNOXVILLE
HAUFE, FRANK J, KNOXVILLE
HAYES JR, TUCKEY J T, KNOXVILLE
HAYWORTH, RAY MILTON, KNOXVILLE
* HEINTZELMAN, JOHN H L, SEAL BEACH, CA
HEISER, DON RICHARD, KNOXVILLE
HEMBREE, DOUGLAS KIRBY, KNOXVILLE
HEMPHILL, JAMES LOUIS, KNOXVILLE
HENDERSON, RICHARD WINN, KNOXVILLE
HENRY JR, JAMES EARL, KNOXVILLE
HENRY, BERTRAM ROWE, KNOXVILLE
* HERNOON, ZELMA L, SANIBEL, FL
HETRICK, THOMAS HENRY, OAK RIDGE
HICKS, EDWARD KENNETH, KNOXVILLE
HILL JR, OLIVER A, KNOXVILLE
HILL, HUBERT CANNON, KNOXVILLE
HITCH JR, JAMES PARKS, KNOXVILLE
HOBART JR, RICHARD LOREN, KNOXVILLE
HOOGE, FREDERICK WM, KNOXVILLE
* HOEY, DAVID FRANCIS, KNOXVILLE
HURTON, BENNETT FRANKLIN, KNOXVILLE
HOSKINS, JOHN C, KNOXVILLE
* HOSKINS, LEON CUND, KNOXVILLE
HOVIS, WM MARVIN, KNOXVILLE
HOWARD JR, G TURNER, KNOXVILLE
HOWE, JOHN W, KNOXVILLE
HUDDLESTON, CHAS IRVING, KNOXVILLE
HODGENS JR, JAMES F, KNOXVILLE
HUOSON JR, ARNOLD R, KNOXVILLE
HUFSTEGLER, FRED E, KNOXVILLE
* HUGGIN, PERRY M, KNOXVILLE
HURST, FRED ALAN, KNOXVILLE
HUSKEY, LARRY CECIL, KNOXVILLE
HUTCHINS, STEPHEN F, KNOXVILLE
HUTSON, CHAS COMBS, KNOXVILLE
HYATT, HUGH CROCKETT, KNOXVILLE
IDOL, ENOCH COLVIN, KNOXVILLE
* INGE, GEORGE L, ALEXANDRIA, VA
* IKWIN, CLIFTON E, KNOXVILLE
JACKSON, ROBERT C, KNOXVILLE
JANZEN, WM ROY, KNOXVILLE
JEFFRIES, GLENN EDWARD, KNOXVILLE
* JENKINS, ASTOR L, KNOXVILLE
JENKINS, BASIA IRENE M, KNOXVILLE
JOBSON, KENNETH O, KNOXVILLE
JOHNSON, CLIFFORD, KNOXVILLE
JOHNSON, JERRY RICHARD, KNOXVILLE
JOHNSON, JOE BREESE, KNOXVILLE
JONES, FRANCIS S, KNOXVILLE
JOST, RICHARD RAYMOND, KNOXVILLE
JOURDAN, PAUL LEON, KNOXVILLE
JOYCE, MARGARET ELIZABETH, KNOXVILLE
JULIUS, CLARK ELDON, KNOXVILLE
KANE, JOHN T, KNOXVILLE
KASSERMAN, FRED B, KNOXVILLE
KATTINE, ANTHONY ALBERT, KNOXVILLE
KELLY, ARTHUR PAT, KNOXVILLE
* KELSO, HAROLD MILLS, KNOXVILLE
KENNEOY, A GLENN, KNOXVILLE
* KENNEOY, JOHN OLNEY, KNOXVILLE
KESTERSON, JOHN E, KNOXVILLE
KHAIROLLAHI, VALI, KNOXVILLE
KHAN, ABOL H, KNOXVILLE
KILLEFER, FRED AYRES, KNOXVILLE
KIM, YOD KEUN, KNOXVILLE
KINCAID, GEOFFREY C, KNOXVILLE
KING, IRVIN RAY, KNOXVILLE
KING, JACK DONALD, KNOXVILLE
KINLAW, STACY HILBURN, KNOXVILLE
KIRK JR, CLIFFORD C, KNOXVILLE
KLEIN JR, VICTOR HILL, KNOXVILLE
KLEIN, CARL JOHN, KNOXVILLE
KLIEFOTH III, A BERNHARD, KNOXVILLE
KNIGHT, LAMAR L, KNOXVILLE
KNOWLING, ROBT EDWARD, KNOXVILLE
KRAEMER, KEITH F, KNOXVILLE
KRAUSS, STEPHEN, KNOXVILLE
KRISLE III, GEORGE MENEES, KNOXVILLE
LACEY III, JOHN W, KNOXVILLE
LAING, WM GAVIN, KNOXVILLE
* LANCASTER, AUGUSTUS H, KNOXVILLE
LANGREN, ROBT CARL, KNOXVILLE
LANGE, ROBT DALE, KNOXVILLE
LARMEE, DONALD EDWARD, KNOXVILLE
LASH, ROBT F, KNOXVILLE
LATHAM, KENT EMERSON, KNOXVILLE
LAW, WM MC CONNELL, KNOXVILLE
LE BEL, SERGE, KNOXVILLE
LEAHY, MICHAEL DOUGLAS, KNOXVILLE
LEONARD, JOE H, KNOXVILLE
* LESHER, JOHN HAROLD, KNOXVILLE
LESTER, THOMAS EDWARD, KNOXVILLE
LEWIS, JAMES VINCENT, KNOXVILLE
LEWIS, ROBT A, KNOXVILLE
LINE, FELIX GLEN, KNOXVILLE
LINTON, EUGENE B, KNOXVILLE
LUMASNEY, THOS LAWRENCE, KNOXVILLE
LONDON, ERANK, KNOXVILLE
LONG, HENRY HEATH, KNOXVILLE
LORCH, VICHIE, KNOXVILLE
LOWRY, THOS HENRY, KNOXVILLE
LOZZIO, CARMEN BERTUCCI, KNOXVILLE
LUNA, JOE LOUIS, KNOXVILLE
LUTTRELL, ARVELL STANLEY, KNOXVILLE
LYNCH, THOS PATRICK, KNOXVILLE
MACLEAN, RONALD N, KNOXVILLE
MAHON JR, JOHN R, KNOXVILLE
MAIGAN, ROBT REGIS, KNOXVILLE
MALONE JR, EDWARD M, KNOXVILLE
MANNING, RICHARD O, KNOXVILLE
MANSY, JOSEPH M, KNOXVILLE
MARCY, JOHN SAML, KNOXVILLE
MARK S MUMFORD MO, KNOXVILLE
MARSHALL, JOHN HOUSSON L, KNOXVILLE
MASSINGALE, H LYNN, KNOXVILLE
MATHEWS, CARL LESLIE, KNOXVILLE
MAY JR, LONNIE C, KNOXVILLE
MAYNARD, MARGARET AGNES, KNOXVILLE
MC CALLEN, PERRY BOIES, KNOXVILLE
MC CAMMON, CURTIS P, KNOXVILLE
MC CAMPRELL, BRUCE R, KNOXVILLE
MC COY III, WM JOHN, KNOXVILLE
MC GHEE, WM EDWARD, KNOXVILLE
MC GINN, LARRY DEAN, KNOXVILLE
MC GINNIS, CARROLL WM, KNOXVILLE
MC KENZIE JR, ELMER W, KNOXVILLE
MC KENZIE, DONALD KEITH, KNOXVILLE
MC KINNEY, MARION BERRY, KNOXVILLE
MC KISSICK, WILLIAM R, KNOXVILLE
MC MURRY, JOS SEARLE, KNOXVILLE
MC PEAKE III, WILLIAM T, KNOXVILLE
MC KENZIE, JEROME F, KNOXVILLE
MCNEELEY, EDWARD TRENT, NORRIS
MCPEAKE, WILLIAM T, LOUDON
MEADOWS, ROBT WALTER, CONCORD
MEYERS, ANTHONY L, KNOXVILLE
MILLER JR, CARTER F, KNOXVILLE
* MILLER, EDWIN E, KNOXVILLE
MILLER, MICHAEL M, KNOXVILLE
MILLER, THOMAS R, KNOXVILLE
MILLER, WM OBOE, KNOXVILLE
MISRA, SARADA N, KNOXVILLE
MITCHELL, DONALD EUGENE, LENOIR CITY
MITCHELL, FOY B, KNOXVILLE
MOBLEY, JACK MURPHY, KNOXVILLE
MONTGOMERY JR, JOHN LEE, KNOXVILLE
MONTGOMERY, JOS TUCKER, NIOTA
MONTGOMERY, ROBERT N, KNOXVILLE
MOON, JOS BENJAMINE, KNOXVILLE
MOORE JR, JOHN DAVID, KNOXVILLE
MOORE JR, MERRILL DENNIS, KNOXVILLE
* MOORE, JOHN DAVID, LLESBURG, FL
MOORE, ROBERT SAYLOR, KNOXVILLE
MOOREHEAD, DOUGLAS EDWARD, KNOXVILLE
MOREHEAD, LANCE, KNOXVILLE
MORGAN, TRAVIS EUGENE, KNOXVILLE
MORRIS JR, ROBERT W, KNOXVILLE
MURRIS, STEVEN ALLEN, KNOXVILLE
MOSELEY, JAMES E, KNOXVILLE
MOUNGER, EMERSON JAY, KNOXVILLE
MUELLER, ROBT LOUIS, KNOXVILLE
MURRAY JR, EDWARD LEE, KNOXVILLE
MUSE JR, WM SCOTT, KNOXVILLE
* MUSE SR, WM S, KNOXVILLE
MUTTER, MITCHELL L, KNOXVILLE

MYERS, JAMES DAVID, KNOXVILLE
 NATELSON, STEPHEN ELLIS, KNOXVILLE
 NEELY, F ROBERT, KINGSPORT
 NELSON JR, CARL AUGUST, KNOXVILLE
 NELSON JR, JOHN R, KNOXVILLE
 NELSON JR, WM ALEXANDER, KNOXVILLE
 NELSON, BILL M, KNOXVILLE
 NEUENSCHWANDER, HAROLD L, KNOXVILLE
 * NICELEY, EUGENE PARK, KNOXVILLE
 * NICHOLS, HAZEL MARIE, KNOXVILLE
 NORWOOD, CHRISTOPHER W, KNOXVILLE
 NOXON, ELVIN B, KNOXVILLE
 OBENDOUR, RICHARD A, KNOXVILLE
 OGGEN, HARRY K, KNOXVILLE
 OGLE, HOMER CAMPBELL, KNOXVILLE
 OTIS, MICHAEL VAUGHN, KNOXVILLE
 OVERHOLT, BERGEIN F, KNOXVILLE
 * OVERHOLT, BERGEIN M, KNOXVILLE
 OVERHOLT, ROBERT MARION, KNOXVILLE
 OWEN, J DAVID, KNOXVILLE
 OZOIL, TURAN, KNOXVILLE
 PACK, RONALD LYNN, KNOXVILLE
 PAINE JR, RAYMOND LEE, KNOXVILLE
 PAPPAS, SAM GEO, KNOXVILLE
 PARK, SOUNG-HO, KNOXVILLE
 PARKER JR, JOSEPH CORBIN, KNOXVILLE
 PARSONS, ROY B, KNOXVILLE
 PATIL, VIJAYA R, KNOXVILLE
 PATTERSON JR, REESE W, KNOXVILLE
 PATTERSON JR, ROBT E, KNOXVILLE
 PATTERSON, FRANCES K, KNOXVILLE
 PATTERSON, WM L, KNOXVILLE
 PAULSEN, WM ALLEN, KNOXVILLE
 PAYNE, FRANCIS HOMER, KNOXVILLE
 PEAGLER, CHAS G, KNOXVILLE
 PEARCE, ROBERT E, KNOXVILLE
 PEEBLES, FRED NEAL, KNOXVILLE
 * PENN, JARRELL, KNOXVILLE
 PERRY, RONALD HOWARD, KNOXVILLE
 * PETERS, H DEWEY, KNOXVILLE
 PHELPS JR, PRESTON V, KNOXVILLE
 PHELPS, RICHARD W, KNOXVILLE
 PIERCE, IRA S, KNOXVILLE
 PIERCE, STEVEN FAULKNER, KNOXVILLE
 PIERCE, TRUETT H, SNEEOVILLE
 PITARD, CECIL E, KNOXVILLE
 * PLATT, SAML JUS, KNOXVILLE
 POOL, MICHAEL L, KNOXVILLE
 PORTER, F RAYMOND, KNOXVILLE
 POWELL, WM FORREST, KNOXVILLE
 * POWERS, BRUCE RANKINS, KNOXVILLE
 POWERS, WILSON WATKINS, KNOXVILLE
 PRATT, GILBERT WM, KNOXVILLE
 PRESSWOOD, JAMES J, KNOXVILLE
 PRIDE, H HAMMOND, KNOXVILLE
 PRINCE JR, THOS CHAFER, KNOXVILLE
 PRINCE, MARK D, KNOXVILLE
 PRINZ, STEPHEN C, KNOXVILLE
 PROSE, JAMES CLINTON, KNOXVILLE
 PURVIS, JOHN T, KNOXVILLE
 RAMOS, ANDRES A, KNOXVILLE
 * RANGE, JOHN A, KNOXVILLE
 RAULSTON JR, KENNETH L, KNOXVILLE
 * RAULSTON, JOS L, KNOXVILLE
 RAWSON, FREEMAN L, KNOXVILLE
 RAY, THOS LAFAYETTE, KNOXVILLE
 REED, STEVEN W, KNOXVILLE
 REED, WARREN G, KNOXVILLE
 REGISTER JR, ROLLAND F, KNOXVILLE
 REID, WILLIAM STUART, KNOXVILLE
 RICHARDS, PAUL O, KNOXVILLE
 RIGGINS, BILLY NEWELL, KNOXVILLE
 RIMER, RONALD LEE, KNOXVILLE
 RIST, TOIVO E, KNOXVILLE
 ROBINSON, RICHARD WALTER, KNOXVILLE
 ROCHESTER, JOHN CRAWFORD, KNOXVILLE
 ROGERS JR, JOHN C, KNOXVILLE
 * ROGERS, JERRY RAY, NORFOLK, VA
 ROGERS, WM KLAIR, KNOXVILLE
 ROWE, BUFORD E, KNOXVILLE
 ROWE, CECIL DARRELL, KNOXVILLE
 RUBRIGHT, ROBT LEE, KNOXVILLE
 RUDDOLPH, BURTON M, KNOXVILLE
 RUEFF, DAVID ANTHONY, KNOXVILLE
 * RULE III, WILLIAM, KNOXVILLE
 RULE, JACK ANDREW, KNOXVILLE
 RULE, KENNETH BOYO, KNOXVILLE
 RUSSELL JR, CECIL E, POWELL
 RUSSELL, ROBT CLAUDE, KNOXVILLE
 RUTH, ALEX, KNOXVILLE
 RUTHERFORD JR, CHAS E, KNOXVILLE
 RUTHERFORD, KYLE OTIS, KNOXVILLE
 RYLANDS, JOHN CRAIG, KNOXVILLE
 SAFFOLD, JOHN HENRY, KNOXVILLE
 SAIN, ROBT LYNN, KNOXVILLE
 SALZMAN, ROBERT J, KNOXVILLE
 SANDBERG, RONALD KENNETH, KNOXVILLE
 SANDERS, JERRY E, KNOXVILLE
 SCARLAND JR, JACK E, KNOXVILLE
 SCHAUMBURG, EDWIN W, KNOXVILLE
 SCHNEIDER, WM JAMES, KNOXVILLE
 SEALS, ROY LEE, KNOXVILLE
 SEATON, DOUGLAS Y, KNOXVILLE
 SEGARS, JAMES HUGH, KNOXVILLE
 SEMMER, JOHN RICHARD, KNOXVILLE
 SERRELL, PAUL BURT, KNOXVILLE
 SEXTON JR, RICHARD CARR, KNOXVILLE
 SEXTON, DAVID HERRON, OAK RIDGE

SEYMOUR, DIGBY GORDON, KNOXVILLE
 SHEA JR, WALTER C, LENOIR CITY
 SHENK, GREGORY I, KNOXVILLE
 * SHIPLEY, ALEX B, KNOXVILLE
 SIOOIQI, NASEEMUL HAQ, KNOXVILLE
 SIENKNECHT, E CHARLES, KNOXVILLE
 * SIMMONS, ALVIS DAVID, CORRYTON
 SIMONS, JON RUPIC, KNOXVILLE
 SMELTZER, CHAS C, KNOXVILLE
 SMITH, BRADFORD W, KNOXVILLE
 SMITH, BRUCE A, KNOXVILLE
 SMITH, EUGENE BAXTER, KNOXVILLE
 SMITH, ROBT LLOYD, KNOXVILLE
 * SMITH, VERNON I, LOUISVILLE
 SMITH, WM BENJ, NEW ORLEANS, LA
 SMITH, WM N, NEW TAZEWELL
 SULLIMON, ALAN, KNOXVILLE
 SOSS, SHELTON BARRY, KNOXVILLE
 SPIEGEL, MARVIN HOWARD, KNOXVILLE
 STALLWORTH, WM PARK, KNOXVILLE
 STEVENS, THOS F, KNOXVILLE
 STILES JR, JAMES H, KNOXVILLE
 STIMPSON, PETER GAGNON, LENOIR CITY
 * STOCKMAN, JOHN MILTON, KNOXVILLE
 SUGANTHARAJ, CHRISTIANA R, KNOXVILLE
 SULLIVAN JR, THOS ALAN, KNOXVILLE
 SULLIVAN, WM ROSS, KNOXVILLE
 SUNDAHL, C GERALD, KNOXVILLE
 SWANN JR, WM KIRK, KNOXVILLE
 SWEET, JO GORDON, KNOXVILLE
 TARMATER, JEAN CATE, KNOXVILLE
 TAUXE, EDWARD L, KNOXVILLE
 TAYLOR, JAMES WALTER, KNOXVILLE
 TEAGUE, DALE ALEXANDER, KNOXVILLE
 TERRY, WILLIAM F, KNOXVILLE
 TIPTON, WM MARSHALL, KNOXVILLE
 TOMKINSON, ELSIE VANNATTA, LOUDON
 TOMPKINS, FORREST G, KNOXVILLE
 TOYOHARA, HIROSHI, KNOXVILLE
 TRAYLOR, THOMAS REID, KNOXVILLE
 TREAT, ELMER LAWRENCE, KNOXVILLE
 TRENT, BILLY CARL, KNOXVILLE
 TRENT, LUCIAN WILLIAMS, KNOXVILLE
 * TROTTER JR, GEO MACK, KNOXVILLE
 TURNER, JAMES ESPY, KNOXVILLE
 * TURNEY, M FRANK, KNOXVILLE
 TYLER JR, WM ALEXANDER, KNOXVILLE
 UNDERWOOD, MICHAEL D, KNOXVILLE
 VAN ARSDELL, ROGER CLAY, KNOXVILLE
 VANDERGRIFF, WM LOWELL, KNOXVILLE
 VELADO, CARLOS L, KNOXVILLE
 VICKERS JR, MARVIN HABER, KNOXVILLE
 VINSANT, CHRISTOPHER L, KNOXVILLE
 WADE JR, DWIGHT ROBT, KNOXVILLE
 WALKER, BRUCE EDWIN, KNOXVILLE
 WALKER, NORMA BRAGG, KNOXVILLE
 WALKER, ROBERT EARL, KNOXVILLE
 WALL, JAMES WHELAND, KNOXVILLE
 WALLACE JR, CALVIN R, KNOXVILLE
 WALLACE, SIOENEY L, KNOXVILLE
 WALLER, DAVID HAGER, KNOXVILLE
 WALLIS, DONALD EDWIN, KNOXVILLE
 WALTON JR, CLIFFORD L, KNOXVILLE
 WARE, ROBT EDWIN, KNOXVILLE
 WATERS JR, JAMES HOUSTON, KNOXVILLE
 WATSON, DAVID THEODORE, KNOXVILLE
 WATTS, GLENN FERRELL, KNOXVILLE
 WEBBER, GEO ROBT, KNOXVILLE
 * WEBER, ALVIN J, MEMPHIS
 * WEBSTER, ROLAND MARION, STRAWBERRY PL
 WEDEKIND JR, ROY A, KNOXVILLE
 WEINBERG, JOSEPH A, KNOXVILLE
 WENDER, CHAS M, KNOXVILLE
 * WEST, FREDERICK, KNOXVILLE
 * WHANGER, HERBERT NOEL, KNOXVILLE
 WHITTAKER, RICHARD L, KNOXVILLE
 WHITTINGTON, JOHN WM, KNOXVILLE
 WHITTLE, ROBT BRUCE, KNOXVILLE
 WILCO, ROBERT A, KNOXVILLE
 WILLIAMS, LEE L, KNOXVILLE
 WILLIAMS, MURIEL LESTER, KNOXVILLE
 * WILLIAMSON JR, G A, KNOXVILLE
 WILLIAMSON, PERRY J, KNOXVILLE
 * WILLIEN, LEON JOHN, KNOXVILLE
 WILLIFORD, WILLIAM N, KNOXVILLE
 WILLINGHAM, RICHARD B, KNOXVILLE
 WILSON JR, STEPHEN GLENN, KNOXVILLE
 WILSON, DAVID O, KNOXVILLE
 * WINEBRENNER, JOHN DANL, KNOXVILLE
 WINN, DONNA MARIE, KNOXVILLE
 WITKE, PAUL EDWARD, KNOXVILLE
 WOHLEWEND, CHAS DAVID, KNOXVILLE
 WOLAVER, JOHN HARRISON, KNOXVILLE
 WOLFE, J FREDERICK, KNOXVILLE
 WOOD, GEORGE H, KNOXVILLE
 WOOTEN, PAUL T, KNOXVILLE
 WOODEN, JAMES P, KNOXVILLE
 WRIGHT, GLENN E, KNOXVILLE
 YARBERRY JR, OTHA HORACE, KODAK
 YATES, JAMES DOUGLAS, KNOXVILLE
 YATTEAU, RONALD FRANCIS, KNOXVILLE
 YODER, MILTON G, KNOXVILLE
 YOUNG, WM TINSLEY, KNOXVILLE
 * YOUNG, VERNON T, KNOXVILLE
 * YOUNG, VINCENT H, CONCORD
 ZACHARY, EUGENE G, KNOXVILLE
 ZIRKLE JR, GEO ANDREW, KNOXVILLE
 ZIRKLE, CHAS RANKIN, KNOXVILLE

LAKEWAY MEDICAL SOCIETY

ALEXANDER, WM KING, MORRISTOWN
 * ALLEN, ERMAN DALE, WHITE PINE
 AMADOR JR, JOSE GARCIA, MORRISTOWN
 ANDREWS, DOUGLAS EUGENE, MORRISTOWN
 BARCLAY, LEE ROY, MORRISTOWN
 * BELLAIRE, MACK J, MORRISTOWN
 BLAKE, CLELAND CONWAY, MORRISTOWN
 BOOKER, BURT L, MORRISTOWN
 BROCK, HOWARD THOS, MORRISTOWN
 * BRYAN, LEANDER C, RUTLEDGE
 BUKEAVICH, ALFRED PETER, MORRISTOWN
 BUKOVITZ, MARY ELIZABETH, MORRISTOWN
 CALOWELL, JOHN DONALD, MORRISTOWN
 CARVER, MICHAEL C, MORRISTOWN
 * CAWOOD, DAVID CLAYTON, JEFFERSON CITY
 CHALFA, NICOLAI, MORRISTOWN
 CHRONIS, ALEX J, MORRISTOWN
 CHONG, SUNG JANG, MORRISTOWN
 CROOK, JERRY JACKSON, MORRISTOWN
 * DAVIS, JOHN KEMP, MORRISTOWN
 DONALD, ROBT H, MORRISTOWN
 DUBY JR, CLARENCE JOS, MORRISTOWN
 ELLIS JR, JOHN W, JEFFERSON CITY
 FETZER JR, JOHN WOODROW, JEFFERSON CITY
 FUSON, PHILIP LEE, MORRISTOWN
 GREENE JR, DAVID LOUIS, MORRISTOWN
 GREENE, RICHARD WM, MORRISTOWN
 GRONWALD, WM ROBT, MORRISTOWN
 GUTCH III, WM JOHN, MORRISTOWN
 HELMS, CRAMPTON HARRIS, MORRISTOWN
 HICKMAN JR, JAMES H, LOWLAND
 HILL, TENNY JACOB, RUTLEDGE
 HOWARD, JESSIE EUGENE, JEFFERSON CITY
 KIM, JOO-TAEK, MORRISTOWN
 KINSER, JOHN H, MORRISTOWN
 LEONARD, CHARLES E, JEFFERSON CITY
 LINSEY, CHARLES HUGH, MORRISTOWN
 LOWRY III, ORLANDA R, MORRISTOWN
 LYNCH, EVERETTE G, MORRISTOWN
 MC NEIL, DAVID WYATT, MORRISTOWN
 MCLEMORE, WAYNE L, MORRISTOWN
 MERRITT, D L, DANORIDGE
 MILLARD, BOBBY JOE, WHITE PINE
 * MILLIGAN, FRANK LESLIE, JEFFERSON CITY
 MILLIGAN, LESLIE, JEFFERSON CITY
 MUNCY, ESTLE PERSHING, JEFFERSON CITY
 PRESUTTI, H G, MORRISTOWN
 REED, PAUL EMORY, SNEEOVILLE
 RENNER JR, OMER CLOYE, MORRISTOWN
 SAMS, JOSIAH B, MORRISTOWN
 SCOTT, CHAS SEALE, MORRISTOWN
 SOMMERS, GEORGE W, MORRISTOWN
 TINDALE, J RAYMOND, MORRISTOWN
 TRUSLER, POWELL MADEN, MORRISTOWN
 WEE ENG, JOSE L, MORRISTOWN
 WILLBANKS, DAVID VERNER, MORRISTOWN
 YATES, RAYMOND BERNARD, MORRISTOWN
 ZIRKLE, JOHN W, JEFFERSON CITY

LAWRENCE COUNTY MEDICAL SOCIETY

BUCKALEW, ROLAND E, LAWRENCEBURG
 CROWDER JR, VIRGIL HOLT, LAWRENCEBURG
 * CROWDER, VIRGIL H, LAWRENCEBURG
 DAVIDSON, BOYO P, LAWRENCEBURG
 HENDERSON, NORMAN LEROY, LAWRENCEBURG
 HUOIGNS JR, JAMES C, LAWRENCEBURG
 MANGUBAT, JAIME VIRATA, WAYNESBORO
 MAURICIO, LILIA O, LAWRENCEBURG
 METHVIN, RAY ELWIN, LORETTO
 MOLLOY, LAURENCE BENJ, LAWRENCEBURG
 QUALLS, JERRY FRANKLIN, LAWRENCEBURG
 SCHUMANN, THOMAS L, LAWRENCEBURG
 SHAH, JAYRAJ C, LAWRENCEBURG
 STALEY, HOMER LEE, LAWRENCEBURG
 TAYLOR, CARSON E, LAWRENCEBURG
 THOMAS, HENRY LEWIS, LAWRENCEBURG
 TURMAN, ALFRED, LAWRENCEBURG
 WEATHERS JR, MALCOLM H, LORETTO

LINCOLN COUNTY MEDICAL SOCIETY

ASHBY, SAM MICHAEL, FAYETTEVILLE
 BLALACK, EDWIN EUGENE, FAYETTEVILLE
 BOLNER, ANNE URNER, FAYETTEVILLE
 * BOOHER, FRANK H, LYNCHBURG
 GOWDA, H R MALLAPPA, FAYETTEVILLE
 JONES, WILLIAM R, FAYETTEVILLE
 JONES, WM O, FAYETTEVILLE
 * MARSHALL, CLYDE B, AROMORE
 * MC RODY, JAMES VAN, COLUMBIA
 MCCAULEY, DAVID R, FAYETTEVILLE
 NORWOOD, BOBBY GRAY, FAYETTEVILLE
 ORGAIN, ROBERT W, FAYETTEVILLE
 PATEL, YASHWANT P, FAYETTEVILLE
 PATRICK JR, THOS ALEX, FAYETTEVILLE
 TOONE, C ODYNE, MYRTLE BEACH, SC
 WHITTEMORE, PAUL EDWARD, FAYETTEVILLE
 YOUNG, WM MC KINNEY, FAYETTEVILLE

MACON COUNTY MEDICAL SOCIETY

BROOKS, WILBERT E, LAFAYETTE
 CHITWOOD JR, CHAS C, LAFAYETTE
 DECK JR, MARVIN EDWARD, LAFAYETTE

MARSHALL COUNTY MEDICAL SOCIETY

ALFREDSON, DAVID G, LEWISBURG
FISHBEIN, RICHARD E, LEWISBURG
JOHNSON, JAMES LEE, LEWISBURG
LEONARD, JOHN CLARENCE, LEWISBURG
LEWIS, MELVIN GLENN, LEWISBURG
* MORGAN JR, HARCOURT A, LEWISBURG
PHELPS JR, KENNETH J, LEWISBURG
PHELPS SR, KENNETH J, LEWISBURG
ROARCH, WM SAXON, LEWISBURG
RUTLEDGE, JONES FLANAGAN, LEWISBURG
SHARMA, N N, LEWISBURG
TAYLOR, WM L, LEWISBURG
TEPEDINO, MICHAEL, LEWISBURG
VAN SLOOTEN, DALE ALLEN, LEWISBURG
VON ALMEN, JOS FRANKLIN, LEWISBURG

MAURY COUNTY MEDICAL SOCIETY

BALL, CHARLES A, MT PLEASANT
BARR, RALPH I, COLUMBIA
BEAVER, ROBERT H, COLUMBIA
BERRY, SIDNEY A, COLUMBIA
BRITE, CHAS RICHARD, COLUMBIA
BROWN, JOHN PRESTON WATTS, COLUMBIA
CLIFFORD JR, RUFUS R, COLUMBIA
DAKE, THOS SCOTT, COLUMBIA
DANIEL, ESLICK EWING, COLUMBIA
DAVIS, PATRICIA CLIFFORD, COLUMBIA
DUNCAN, THOS KAY, COLUMBIA
FERRELL, HAROLD WILEY, COLUMBIA
FIEDLER JR, GEO ADOLPH, COLUMBIA
EITTS JR, JAMES MORGAN, COLUMBIA
FUQUA, WM G, COLUMBIA
GARDNER JR, CARL C, COLUMBIA
GRAY JR, DANL ROGER, COLUMBIA
HARGROVE, JOEL T, COLUMBIA
HARMON JR, ROY F, COLUMBIA
HARTMAN, PATRICK ERWIN, COLUMBIA
HARWELL, VALTON CARPEN, COLUMBIA
HAUSMANN, JAN M, COLUMBIA
HELM, HARRY CLAY, COLUMBIA
HUDSON, CHAS CRAIG, COLUMBIA
JERNIGAN, WILLIAM N, COLUMBIA
KELLEY, JAMES PRINKLEY, COLUMBIA
KUSTOFF, RALPH, COLUMBIA
LANGA, AMBROSE M, COLUMBIA
LAY, ALLYN MONROE, COLUMBIA
LEACH, JAMES W, COLUMBIA
LYLES, ROBIN, COLUMBIA
MAYFIELD JR, GEO RANFORD, COLUMBIA
MILLER, CLAY R, COLUMBIA
MOORE, KENNETH LYNN, COLUMBIA
NICKELL, LAWRENCE R, COLUMBIA
OLSON, JOHN RICHARD, COLUMBIA
* ORR, WILLIAM F, NASHVILLE
OVERTON, MARY E, COLUMBIA
PARROTT, EARL QUINTON, COLUMBIA
* PROVDST, EDWIN K, MONTEAGLE
RAYBURN JR, M TAYLOR, COLUMBIA
REED, ROBERT M, COLUMBIA
ROBINSON II, WM ALLISON, COLUMBIA
SIMMONS, STEPHEN R, COLUMBIA
SISK, ANDREW WEBB, COLUMBIA
STRICKLAND, RAYMOND C, COLUMBIA
THOMPSON JR, ROBT GUEVIN, COLUMBIA
VINSON, RILLY JOE, COLUMBIA
* WARD, LEON S, COLUMBIA
WHITE, THOS KAY, COLUMBIA
WIESMAN, H JAMES, COLUMBIA
WILBURN, CHARLES D, COLUMBIA
WILKES JR, JAMES WALLACE, COLUMBIA
WILLIAMS JR, JOHN O, MOUNT PLEASANT
YOUNG JR, THOS KAY, COLUMBIA

McMINN COUNTY MEDICAL SOCIETY

ACKADOUY, GEO E A, ATHENS
ROLIN, WILLIAM R, ATHENS
BOWERS, WM RICHARD, ATHENS
BOYCE, JAMES REID, ATHENS
HURDOUGHS II, WALLACE F, ATHENS
CAPROLL, CHAS THOS, ATHENS
CLEVELAND, JAMES ERANKLIN, ENGLEWOOD
* CURTNER, LEWIS DEMPSEY, ATHENS
DAVIS, WM MAYFIELD, ATHENS
DENTON, STEPHEN L, ENGLEWOOD
EDRFF JR, WM EDWIN, ATHENS
FULMER, RUGER CARL, ATHENS
GRIFFITH, SHELLEY F, ATHENS
HARGIS, LARRY JACKSON, ATHENS
HEWGLEY, ROBT GARDNER, ATHENS
JONES, MILNOR, ATHENS
Lef, YUNG GIL, ETOWAH
LEMINGS, STEPHEN, ATHENS
MC KENZIE, JOHN CARL, ATHENS
* MONTGOMERY SR, JOHN L, ATHENS
MORRIS, WM GOURRIER, ATHENS
ORDONEZ, LUIS J, ETOWAH
PERIOTT, ANTONIO S, ETOWAH
* POWELL, JESS A, ATHENS
ROZAR, G E, ATHENS
* SHIELDS, LESTER HOWARD, ATHENS
SLOWEY III, JAMES FERGUS, ATHENS
SMITH, SAMMY M, ATHENS
SNIFFER, IRIS G, ATHENS

SONI, HARISH BABULAL, ETOWAH
SONI, RENUKA HARISH, ETOWAH
TROTTER, ROBT WM, ATHENS
WHITTLE JR, HERBERT P, CHARLESTON
WILLIAMS, THOS WOLFORD, ETOWAH

MEMPHIS-SHELBY COUNTY MEDICAL SOCIETY

ACKER, JAMES D, MEMPHIS
ACKERMAN, ROBT F, MEMPHIS
* ACUFF, JAMES HARVEY, MEMPHIS
ADAMS JR, WM MILTON, MEMPHIS
ADAMS, JOHN Q, MEMPHIS
ADAMS, JOHN ROBT, MEMPHIS
ADAMS, LORENZO H, MEMPHIS
ADAMS, ROBT ERANKLIN, MEMPHIS
ADCOCK III, FRANK JOHN, CORDOVA
ADKINS, HENRY LEIGH, MEMPHIS
* ADLER, JUSTIN H, MEMPHIS
* AGEY, C CUE, BARTLETT
AIVAZIAN, GARABED HAGOP, MEMPHIS
AKERS, HOWARD THOS, MEMPHIS
AKINS, CHARLES O, MEMPHIS
AKISKAL, HAGOP SOUREN, MEMPHIS
ALABASTER, ALAN M, MEMPHIS
ALBRITTON, JOHN FORTUNE, MEMPHIS
ALEXANDER JR, ALBERT M, MEMPHIS
ALI, ZENAB AHMED, MEMPHIS
ALLBRITTEN, JAMES F, MEMPHIS
ALLEN, CHESTER G, MEMPHIS
ALLEN, FRANK S, MEMPHIS
* ALLEY, FRANKLIN H, SOMERVILLE
ALSTON, JAMES L, MEMPHIS
AMONETTE, KEX ALLEN, MEMPHIS
* ANDERSON JR, SAM B, MEMPHIS
ANDERSON, GARLAND O, MEMPHIS
ANDERSON, JOE PAT, MEMPHIS
* ANDERSON, KEITH G, MEMPHIS
ANDREWS, C RADERD, MEMPHIS
ANDREWS, WM E, MEMPHIS
ANGEL, JOHN JOSEPH, MEMPHIS
ANISHANSLIN, DONALD N, COLLIERVILLE
ANTHONY, ROBT A, MEMPHIS
ARLEGATE, WILLIAM PROWN, MEMPHIS
ARKIN, CHAS RICHARD, MEMPHIS
ARMES JR, WM HERBERT, MEMPHIS
ARNDOFF, PHILIP MELVIN, MEMPHIS
* ASTE, J MALCOLM, MEMPHIS
ATHERTON, HAZEL EARL, MEMPHIS
ATKINS, LELAND LANGSTON, MEMPHIS
ATKINSON, RICHARD AGARD, MEMPHIS
ATWOOD, JOHN WESLEY, MEMPHIS
ATWOOD, SUE C, MEMPHIS
* AULT, BETTINA HARMAN, MEMPHIS
AUSTIN, JOHN LINDSAY, MEMPHIS
AUSTIN, JOHN ROGER, MEMPHIS
AVGERIS, JOHN A, MEMPHIS
AWOEH, MAHIR KAMIZ, MEMPHIS
* AYRES JR, JOHN C, MEMPHIS
BAILEY, JAMES WESLEY, MEMPHIS
BAIRD, JOHN WM, MEMPHIS
* BAKER, CAROLYN LESLIE, MEMPHIS
BAKER, IRVIN C, MEMPHIS
BAKER, JDS E, MEMPHIS
BAKER, MALCOLM A, ARLINGTON
BALAS, GEORGE I, MEMPHIS
BALLE, GEO FRANKLIN, MEMPHIS
* BALLARD, THOMAS KELLY, MEMPHIS
RALLENGER, REID LANGFORD, MEMPHIS
HANG, HOI JINE, GERMANTOWN
* BARKER, ROY M, MEMPHIS
BARKER, CHARLES L, FORREST CITY, AR
BARKER, GEO LOVELACE, MEMPHIS
* PARKER, JOSEPH DAVIN, MEMPHIS
BARNES, ROY JAMES, MEMPHIS
* BARNETT, ARDEN O, MEMPHIS
BARR, JAMES R, MEMPHIS
BARRASSO, JEROME N, MEMPHIS
* BARRON, DAVID MICHAEL, MEMPHIS
BASKIN, REED CARL, MEMPHIS
* BASSETT, GEO H, MEMPHIS
BATTAILLE, JDS CHANDLER, MEMPHIS
PATTAILLE, NAJIRA A H, MEMPHIS
BEALE, HOWARD LEO, MEMPHIS
BEATUS JR, BENJ LOUIS, MEMPHIS
BEATY JR, JAMES HAROLD, MEMPHIS
BEEMAN, HELEN G, MEMPHIS
* BEIS, RUSSELL D, MEMPHIS
BELL JR, EMMETT DIXON, MEMPHIS
BELL, JAMES SPENCER, MEMPHIS
BELL, STEVEN HUNTER, MEMPHIS
* BELL, THOMAS CHARLES, MEMPHIS
BELLOTT JR, ARTHUR L, MEMPHIS
* BENNETT, HAL ELDER, MEMPHIS
BERTORINI, TULLIO E, MEMPHIS
BEVILACQUA, ALDO ROMANO, MEMPHIS
BICKS, RICHARD O, MEMPHIS
BIELSKIS JR, WILLIAM M, MEMPHIS
BIGGS, JACK C, SOUTHAVEN, MS
* BILES JR, JAMES O, MEMPHIS
BIROSDONG JR, EMMETT S, MEMPHIS
BISHOP, CALVIN R, MEMPHIS
BISNO, ALAN LESTER, MEMPHIS
* BISSON, WHEELUCK A, MEMPHIS
BISWAS, AJIT KUMAR, MEMPHIS
* BLACK JR, WM THOS, MEMPHIS

BLACK, TIMOTHY LEE, MEMPHIS
BLACKWELL JR, SAML JOS, MEMPHIS
BLACKWELL, CAROLYN FISER, MEMPHIS
BLAIR, JOHN RODNEY, MEMPHIS
BLAND JR, BASIL A, MEMPHIS
BLAND, GEO B, MEMPHIS
* BLANKENSHIP, BRAD EDWIN, MEMPHIS
* BLANTON, DONALD MCCLAIN, MEMPHIS
* BLEECKER, PHILIP B, MEMPHIS
BLUMEN, HERBERT, MEMPHIS
BLUMENFELD, HARRY BERNARD, MEMPHIS
BLYTHE III, JDS ALFRED, MEMPHIS
BOALS III, JDS CALLAWAY, MEMPHIS
BOALS, JAMES WM, MEMPHIS
BOBO, ROBT THOMPSON, MEMPHIS
* BOGGS, MARY CHARLAYNE, MEMPHIS
* BOOM, ALAN DEXTER, MEMPHIS
BOONE, HOWARD A, MEMPHIS
BOONE, JAMES E, MEMPHIS
BOONE, THIRAVAN, MEMPHIS
POOTH, JAMES LIVINGSTON, MEMPHIS
* BORING, JAMES HOWARD, MEMPHIS
BOSWELL, JAMES LIONEL, MEMPHIS
BOSWELL, RICHARD LEE, MEMPHIS
* BOULDIN, MARY E, CLARKSDALE, MS
BOURLAND JR, ROBT LEON, MEMPHIS
BOURLAND, WM LANDESS, MEMPHIS
* BOWEN, JANET WILDER, MEMPHIS
* BOWERMAN, EARL P, MEMPHIS
BOYO JR, ALLEN STREET, MEMPHIS
* BRADLEY, JAMES FREDERICK, MILLINGTON
BRADY, POYER M, MEMPHIS
* BRANDON, THOMAS ALBERT, MEMPHIS
BRAUN, WINSTON, MEMPHIS
BRIDGES, JAMES T, MEMPHIS
BRITT, LOUIS GUDONN, MEMPHIS
BRONSTEIN, MAURY W, MEMPHIS
BROOKS, BROWN, MEMPHIS
* BROOKS, MARIA T, MEMPHIS
BROWN, JAMES S, NASHVILLE
* BRUNNER, RICHARD GARMANY, MEMPHIS
BRUNT, CHAS HAL, MEMPHIS
BRYAN, THORNTON E, MEMPHIS
BRYANT, JAMES W, MEMPHIS
BUCHALTER, ROBT, MEMPHIS
BUCHIGNANI, JOHN SHEA, MEMPHIS
BUCHIGNANI, JDS ANTHONY, MEMPHIS
BUCKLEY JR, MADISON H, MEMPHIS
BURANAPIYAWONG, ARKON, MEMPHIS
BURKE, LARRY D, MEMPHIS
BORKLE III, GEO HENRY, GERMANTOWN
BORROW, WM BOOKER, MEMPHIS
BURTON, WILLIAM DUER, MEMPHIS
BUSPY, MICKY L, MEMPHIS
BUTLER, DOROTHY ANN HICKS, MEMPHIS
BUTLER, RICHARD MASON, MEMPHIS
BUXTON, BERTRAM H, MEMPHIS
BYAS, JAMES S, MEMPHIS
CAEFEY, SHEO H, MEMPHIS
CALANORUCCIO, ROCCO A, MEMPHIS
CALDWELL, EDWARD PRICHARD, MEMPHIS
* CALLAWAY, THOMAS HAILE, MEMPHIS
CALLISON, MASTON K, MEMPHIS
CAMACHO, ALVARO MANUEL, MEMPHIS
* CAMPBELL, EDWARD G, MEMPHIS
CANALE, DEE JAMES, MEMPHIS
CANALE, JAMES LAWRENCE, MEMPHIS
CANALE, STORLA TERRANCE, MEMPHIS
CANCIO, CONSOLACION V, MEMPHIS
CANNDN, BLAND WILSON, MEMPHIS
CAPE, CHAS ALBERT, MEMPHIS
CARA JR, DOMINIC JOS, MEMPHIS
CARADINE JR, ROBT SIDNEY, MEMPHIS
CARNESALE, RETER GUYDON, MEMPHIS
CARROLL, DAVID S, MEMPHIS
CARRUTHERS JR, DANL E, MEMPHIS
* CARTER JR, LOUIS L, MEMPHIS
CARTER, HARVEY WALLACE, MEMPHIS
CARTER, JAMES ROLAND, MEMPHIS
* CARTER, LOUIS L, MEMPHIS
CASHION, ERNEST L, MEMPHIS
CASTELLAW, MARK ALLAN, MEMPHIS
* CHAMBERLIN JR, ARLIE H, MEMPHIS
CHAPPELL, FENNICK W, MEMPHIS
CHARLES, STEVEN THOS, MEMPHIS
CHATTERJEE, SHEKHAR C, MEMPHIS
CHAUHAN, DINESH N, MEMPHIS
CHEATHAM, CHAS PHILLIPS, MEMPHIS
CHEEK, RICHARD CALVIN, MEMPHIS
CHESNEY, CAROLYN M, MEMPHIS
CHISOLM JR, JOE M, NASHVILLE
CHISOLM, JOHN COBEN, MEMPHIS
CHRISTORHER, ROBT PAUL, MEMPHIS
CHUANG, HOWARD JYI JUANG, MEMPHIS
CLAKENNDN, COLIN C O, MEMPHIS
CLARK JR, DWIGHT WITT, MEMPHIS
* CLARK, GLENN MARSH, MEMPHIS
* CLARK, JIMMY R, MEMPHIS
* CLARK, SALLY P, MEMPHIS
CLARKE, CHAS L, MEMPHIS
* CLOSE, RAMELYN, MEMPHIS
CUCKE JR, EDWIN A, MEMPHIS
COCKROET, ROBT LAWRENCE, MEMPHIS
* COEER, CYNTHIA ANNE, MEMPHIS
COHEN, LAWRENCE LOUIS, MEMPHIS
* COHEN, MORRIS O, MEMPHIS
COHN, RICHARD A, MEMPHIS
COLE III, WILLIAM L, MEMPHIS

COLF JR, F HAMMOND, MEMPHIS
 COLLE, FRANCIS HAMMOND, MEMPHIS
 COLEMAN JR, SIDNEY A, MEMPHIS
 COLLINS, BLAINE C, MEMPHIS
 COLLINS, DAVID NEWTON, MEMPHIS
 COLLINS, FRANK H, MEMPHIS
 COLLINS, JAMES H, MEMPHIS
 CONRAD, LYNN WILSON, MEMPHIS
 CONWAY, JOHN PATRICK, MEMPHIS
 # COOK, WILLIAM GREGORY, MEMPHIS
 COOPER, CHARLIE WALTER, MEMPHIS
 COOKS, GLO A, MEMPHIS
 COPELAND, GED O, MEMPHIS
 CORNELIUS, LELAND RAE BURN, SOUTHAVEN, MS
 COUCH SR, CHAS EDWARD, MEMPHIS
 COURINGTON, DORIS PAYNE, MEMPHIS
 CUX III, SAM J, MEMPHIS
 # COX JR, JAMES W, MEMPHIS
 COX, CLAIR EDWARD, MEMPHIS
 # CRAIG, CAROL S, MEMPHIS
 CRAVEN, RUFUS EDGAR, MEMPHIS
 # CRAWFORD II, DONALD A, MEMPHIS
 CRAWFORD, JOHN D, COLLIERSVILLE
 CRAWFORD, LLOYD V, MEMPHIS
 # CRENSHAW JR, ANDREW H, MEMPHIS
 CRENSHAW, ANDREW HOYT, MEMPHIS
 CRESON JR, THOMAS K, MEMPHIS
 CREWS, JOHN T, MEMPHIS
 CRISLER JR, HERMAN A, MEMPHIS
 # CRISLER JR, JOS A, MEMPHIS
 CROCKARELL, JOHN REAMS, MEMPHIS
 CROCKER, DIANE WINSTON, MEMPHIS
 CROCKER, ROBT A, MEMPHIS
 # CROCKFITT JR, ROBT N, MEMPHIS
 # CROOK JR, JERRALL P, MEMPHIS
 CROSBY, VIRGIL GLENN, MEMPHIS
 CROWF JR, LEE RAY, MEMPHIS
 CROWN, LOREN ARTHUR, MEMPHIS
 CRUMKINE, ROBERT S, MEMPHIS
 CRUPIE, JOS E, MEMPHIS
 CRUTHIROS, TERRY PARK, MEMPHIS
 CUMMINGS, JOHN M, MEMPHIS
 CUMMINS, ALVIN JOS, MEMPHIS
 CUNNINGHAM, DAVID LANE, MEMPHIS
 CURLE, RAY EUGENE, MEMPHIS
 CURREY, THOS ARTHUR, MEMPHIS
 DANG, LUU HUY, GERMANTOWN
 DAUGHERTY, CHAUNCEY O, MEMPHIS
 DAVIDSON III, ORIN L, MEMPHIS
 DAVIDSON JR, ORIN L, MEMPHIS
 DAVIS JR, JESSE THEO, MEMPHIS
 DAVIS, EDNA M FITZJARRREL, MEMPHIS
 DAVIS, HARRY L, MEMPHIS
 DAVIS, THOS ALLEN, MEMPHIS
 DE MERE, MC CARTHY, MEMPHIS
 DE SAUSSURE JR, R L, MEMPHIS
 DE SHAZO, MICHAEL HENRY, MEMPHIS
 DEATON, WM JERRY, MEMPHIS
 # DEOMON, CINDY TURNER, MEMPHIS
 DELLINGER JR, HUBERT L, MEMPHIS
 # DEMENT, JOSEPH MILLER, MEMPHIS
 # DEMOS, JANE HOWELL, MEMPHIS
 DEMPSEY, THOMAS JACKSON, MEMPHIS
 DEWEFSE, MELVIN WAYNE, MEMPHIS
 DIGGS, JOHN SPENCER, MEMPHIS
 # DIGGS, LEMUEL WHITLEY, CORDOVA
 DILAWARI, RAZA ALI, MEMPHIS
 DILTS JR, PRESTON VINE, MEMPHIS
 DIRMEYER, PHILLIP HAYS, MEMPHIS
 DISMUKE, STEWART EDWARDS, MEMPHIS
 DISMUKES, DON ELMO, MEMPHIS
 DISNEY, JERE MICHAEL, MEMPHIS
 DOBSON, JOHN M, MEMPHIS
 DODGE, HERBERT SHUBERT, MEMPHIS
 DORTAN, JOHN BERNARD, MEMPHIS
 # DOTY III, THOMAS W, MEMPHIS
 DOWLING, CHAS VICTOR F, MEMPHIS
 ORAKE, ARNOLD MANNAS, MEMPHIS
 ORENNING, PAUL THOMAS, MEMPHIS
 ORENNY JR, RICHARD DANL, MEMPHIS
 # DU BARD, HORTON GEE, MEMPHIS
 DUBERSTEIN, LARRY EDWIN, MEMPHIS
 # DUCKWORTH, HUGH KELLY, MEMPHIS
 DUCKWORTH, JOHN KELLY, MEMPHIS
 DUCKWORTH, NANCY C H, MEMPHIS
 DUCKWORTH, PATRICIA PEARL, MEMPHIS
 DUGDALE, MARTIN, MEMPHIS
 DUGGIRALA, PRASAU S, MEMPHIS
 DUGGIRALA, VIJAYA L, MEMPHIS
 DUKE, DON OF WINOLE, MEMPHIS
 DUNAVANT JR, WM DAVID, MEMPHIS
 DUNAVANT, WM DAVID, MEMPHIS
 DUNAWAY, DAN ALEXANDER, MEMPHIS
 DUNCAN JR, JAMES T, MEMPHIS
 DUNCAN, JERALD MARK, MEMPHIS
 DUFFEY, JOHN QUINCY, MEMPHIS
 EASON, HAMEL BOWEN, MEMPHIS
 EASON, LESLIE EDMUND, MEMPHIS
 ECONOMIDES, NICHOLAS-JOHN, MEMPHIS
 EDMONSON, ALLEN S, MEMPHIS
 EDWARDS, NEIL B, MEMPHIS
 EISENSTEIN, BARRY I, SAN ANTONIO, TX
 ELKINS, THOMAS F, MEMPHIS
 ELLIOTT, RODNEY GORMAN, MEMPHIS
 EMMETT, JOHN ROY, MEMPHIS
 ENGELBERG, JERRY, MEMPHIS
 ENNIS, RICHARD LYN, MEMPHIS
 ENSOR, JAMES K, GERMANTOWN

EPSTEIN, EUGENE U, MEMPHIS
 # ERICKSON, CYRUS CONRAD, MEMPHIS
 ERWIN, STANLEY WAYNE, KNOXVILLE
 # ETTFLOORF, J N, MEMPHIS
 # ETTMAN, IRVING KELSEY, MEMPHIS
 EUBANKS JR, OTHA A, MEMPHIS
 # EVANS, JOHN O, MEMPHIS
 EVANS, MILTON LEE, MEMPHIS
 # EVERETT JR, BENNETT E, MEMPHIS
 FABIAN, TIMOTHY CHARLES, MEMPHIS
 FALVEY, WILLIAM DAVIS, MEMPHIS
 FANCHER, WILLIAM H, MEMPHIS
 # FANT, GEORGE ERNEST, MEMPHIS
 FAQUIN, CORNELL CHAS, MEMPHIS
 FARLEY, HAROLD G, MEMPHIS
 FARRAR, TURLEY, MEMPHIS
 FARROW JR, C CRESTON, MEMPHIS
 FAULKNER, WM LAWRENCE, MEMPHIS
 FEILD, JAMES ROONEY, MEMPHIS
 FEINSTEIN, HAROLD, MEMPHIS
 FERGUSON, JOHN MITCHELL, MEMPHIS
 FERRELL, THADDEUS HAGAN, MEMPHIS
 # FESMIRE, WILLIAM MURRAY, MEMPHIS
 EIDLER JR, WM JONAS, MEMPHIS
 # FIELDS, LOUIS B, MEMPHIS
 FIORANELLI, RAYMOND JAMES, MEMPHIS
 FISHER JR, JOSEPH N, MEMPHIS
 FISHER, DANL F, MEMPHIS
 FISHER, ROBT MOORE, MEMPHIS
 FLANAGAN, JAMES BARRY, MEMPHIS
 FLANAGAN, WILLIAM H, MEMPHIS
 FLEMING, IRVIN DURANT, MEMPHIS
 FLEMING, JAMES CHRISTIAN, MEMPHIS
 FLEMING, JULIAN GLENN, MEMPHIS
 FLINN JR, GEO SHEA, MEMPHIS
 FLORENDO, NOEL TADIAR, MEMPHIS
 FLOWERS, ARTHUR R, MEMPHIS
 FLOWERS, WM PARKS, MEMPHIS
 # FULGER, WALTER H, MEMPHIS
 FUNER, MAX, MEMPHIS
 FUNGWITOD, THIRACHIT, MEMPHIS
 # FORTSYTHE, PHILLIP DAVID, MEMPHIS
 FORTUNE, JAMES EVERETT, MEMPHIS
 FOUNTAIN JR, FRANCIS F, MEMPHIS
 ERANCIS JR, HUGH, MEMPHIS
 FRANCISCO, JERRY THOS, MEMPHIS
 FRANKLIN, EDGAR R, MEMPHIS
 FRANKUM, CHAS EUGENE, MEMPHIS
 FREDFRICK, WILLIAM R, HELENA, AR
 FREE, LOVELY ARZETTA, MEMPHIS
 FREEMAN, BARNEY LYNN, MEMPHIS
 FREEMAN, JERRE MINOR, MEMPHIS
 FRENCH, WM E, MEMPHIS
 FRIDMAN, HARRY, MEMPHIS
 FUDGE, TOMMY L, MEMPHIS
 FUSTE, RICARDO R, MEMPHIS
 FUTRELL, THOMAS WALTER, MEMPHIS
 # GADBFERRY, EUGENE WARNER, MEMPHIS
 GALINDEZ, TELMO, MEMPHIS
 GALYON, JAMES THEODORE, MEMPHIS
 GAMMILL, STEPHEN LANE, MEMPHIS
 # GANT, LINDA LONG, MEMPHIS
 GARBARINI JR, JOS C, MEMPHIS
 GARDNER JR, LAWRENCE G, MEMPHIS
 GARDNER, HERBERT COLBY, MEMPHIS
 GARDNER, JOHN HARVEY, MEMPHIS
 GARRETT, HARVEY E, MEMPHIS
 GARRETT, RICHARD HENRY, MEMPHIS
 GAVANT, MORRIS L, MEMPHIS
 GAY, JAMES R, MEMPHIS
 GAYDEN, JOHN O, MEMPHIS
 # GEHORSAM, ELSEBETH, MEMPHIS
 GEORGE, LEWIS WATSON, MEMPHIS
 GERALD, BARRY ELMO, MEMPHIS
 GESKE, TERRENCE EDWARD, MEMPHIS
 GETTELFINGER, THOMAS C, MEMPHIS
 # GILLESPIE, TIMOTHY GRAHAM, MEMPHIS
 GILLULY, JOHN JOS, MEMPHIS
 GILTMAN, LARRY IRWIN, MEMPHIS
 GINN, BOBBY H, MEMPHIS
 GISH, GEO EDWARD, MEMPHIS
 GIVENS, JAMES ROBT, MEMPHIS
 GLADDING, THOS CONGDON, MEMPHIS
 GLAZER, LOUIS, MEMPHIS
 GOOSEY, WM COLE, MEMPHIS
 GOKTURK, TURGUT KEMAL, MEMPHIS
 GULO, ROBERT E, MEMPHIS
 # GOLDBERG, FRED A, MEMPHIS
 GOLDBERG, MARSHALL, MEMPHIS
 GULOHAMMER, PHILLIP, MEMPHIS
 GOLDIN, MELVIN LESTER, MEMPHIS
 GOOCH, JERRY BURTON, MEMPHIS
 GOODE, FLETCHER HOWARD, MILLINGTON
 GOODMAN JR, THOMAS E, MEMPHIS
 GOODMAN, KALPH, MEMPHIS
 # GORDON, TIMOTHY EDWARD, MEMPHIS
 GORLINE, WILLIAM JAMES, MEMPHIS
 GOTTEN JR, NICHOLAS, MEMPHIS
 # GOTTEN, HENRY BRAGG, MEMPHIS
 # GOTTEN, NICHOLAS, MEMPHIS
 GOURLEY, ROBT DUNSEITH, MEMPHIS
 GRAGG JR, WILFORD H, MEMPHIS
 GRANT, WM CRAIG, MEMPHIS
 GRATZ JR, JOHN EISHER, MEMPHIS
 GRAVES JR, LESTER R, MEMPHIS
 GREEN JR, JAMES BUTLER, MEMPHIS
 # GREENF JR, ROBERT W, MEMPHIS
 GRIFFIN, DANIEL EUGENE, MEMPHIS

GRIFFIN, JOHN PATRICK, MEMPHIS
 GRISE, JERRY WADE, MEMPHIS
 GROBMYER III, ALBERT JOS, MEMPHIS
 # GROBMYER JR, ALBERT JOS, MEMPHIS
 GROGAN JR, FRED T, MEMPHIS
 GROSS, CHAS WAYNE, MEMPHIS
 GROSSMAN, RONALD K, MEMPHIS
 GUNN, JOHN L, MEMPHIS
 GUYTON, JOS L, MEMPHIS
 GWIN, JOHN FRANKLIN, MEMPHIS
 HAGGITT, ROGER C, MEMPHIS
 HAIMSOHN, JAMES S, MEMPHIS
 HAJGHASSEMAL, MEHRDOOHT, MEMPHIS
 HALFORD JR, HOLLIS H, MEMPHIS
 HALFORD, JACK RICHARD, MEMPHIS
 # HALL, JOHNNIE CAMERON, MEMPHIS
 HALL, SYLVIA A, MARTIN
 # HALL, VONNIE ARTESIA, MEMPHIS
 HALLE, MARGARET J A, MEMPHIS
 # HAMILL, RANDY LEE, MEMPHIS
 HAMILTON, EMILY THOMAS, MEMPHIS
 # HAMILTON, JOHN EARLE, MEMPHIS
 HAMILTON, RALPH F, MEMPHIS
 HAMILTON, RALPH S, MEMPHIS
 HAMILTON, WM THOS, MEMPHIS
 HAMLETT III, JAMES M, MEMPHIS
 HAMSHER, JOHN B, MEMPHIS
 HANISSIAN, ARAM S, MEMPHIS
 HARELL, MOSHE, MEMPHIS
 HARLAN, CHARLES W, MEMPHIS
 HARELL, ETHEL ASHTON, MEMPHIS
 HARRINGTON, OSCAR B, MEMPHIS
 # HARRIS JR, JOHN J, MEMPHIS
 HARRIS, BUFORD TERRELL, MEMPHIS
 HARRIS, JOHN JOEL, MEMPHIS
 # HARRIS, PAULA PILGRIM, MEMPHIS
 HARWELL JR, CARL M, MEMPHIS
 HASEN JR, HOWARD B, MEMPHIS
 HASEN, HOWARD B, MEMPHIS
 HATCH JR, FRED E, MEMPHIS
 HAWKES, ALFRED KENNETH, MEMPHIS
 HAWKES, C DOUGLAS, MEMPHIS
 HAWKES, JFAN MURRAY, MEMPHIS
 HAY, CYRIL LEON, MEMPHIS
 # HAYDEN, TIMOTHY W, MEMPHIS
 # HAYES, WAYLAND JACKSON, MEMPHIS
 HAYES, WM TIMOTHY, MEMPHIS
 HEAD, THOMAS GLENN, MEMPHIS
 HECK, ALBERT FRANK, MEMPHIS
 HENARD, DONALO CLAUDE, MEMPHIS
 HENDRIX JR, JAMES H, MEMPHIS
 HENRY, LOUIE C, MEMPHIS
 HEPWORTH, RICHARD GORDON, MEMPHIS
 HERNDON JR, BRUCE WAYNE, MEMPHIS
 HERPINGTON, CLARENCE G, MEMPHIS
 HERTZ JR, CHARLES S, MEMPHIS
 HIATT, ROGER LEW, MEMPHIS
 HICKEY JR, HOMER DAVID, MEMPHIS
 HIGDON, DENNIS ALAN, MEMPHIS
 HIGGINBOTHAM, THOS WAYNE, MEMPHIS
 HIGLEY JR, GEO BRAINARD, MEMPHIS
 # HIGLEY, GEO BRAINARD, MEMPHIS
 HILL, EONTAINE S, MEMPHIS
 # HILL, JAMES MARK, MEMPHIS
 HILL, JOHN ROY, MEMPHIS
 HILSENBECK JR, JOHN ROBERT, MEMPHIS
 HINES, ELBERT EDWIN, MEMPHIS
 HINES, KENNETH LEE, MEMPHIS
 HINES, LEONARD HARVEY, MEMPHIS
 # HIPPEN JR, ROBERT L, MEMPHIS
 HIXSON, SHERMAN D, MEMPHIS
 HODGES, JOHN MC IVER, MEMPHIS
 # HODGES, TERI L, MEMPHIS
 HOFFMAN JR, WALTER K, MEMPHIS
 HOLLABAUGH, ROBT STERLING, MEMPHIS
 HOLLAND, NANCY ELIZABETH, MEMPHIS
 HOLLIDAY, THOS LINTON, MEMPHIS
 HOLLOWAY JR, DAVID HOYT, MEMPHIS
 # HOLLY, HOWARD RHEA, MEMPHIS
 # HOLMES, JAMES ELMORE, MEMPHIS
 HOLMES, JOHN PIERCE, MEMPHIS
 HOLMES, PERRY DON, MEMPHIS
 HOLT, HUEY THOS, MEMPHIS
 HOOD, STEPHEN THOS, MEMPHIS
 HOPKINS, JACK T, MEMPHIS
 HORNE, ARTHUR E, MEMPHIS
 HORTON, GLENN EDWARD, MEMPHIS
 # HOTCHKISS, HUBERT LFECH, MEMPHIS
 HOUSHOLDER, CHAS H, MEMPHIS
 HOUSTON, JOHN L, MEMPHIS
 HOVIOUS, JOHN R, MEMPHIS
 # HOWARD, WM T, MEMPHIS
 HOWSE, ROBERT JULIAN, MEMPHIS
 HOWSE, JOHN PATTON, MEMPHIS
 HUANG, SHANG PO, MEMPHIS
 HUBBARD, RONALD EUGENE, MEMPHIS
 HUBBERT, CHAS HUGHES, COLLIERSVILLE
 HUDSON, JOS STALM, MEMPHIS
 HUDSON, SUF BETH, MEMPHIS
 HUFF, CARL WAYNE, MEMPHIS
 HUFFMAN, JOHN DAVID, MEMPHIS
 # HUGHES JR, FELIX A, MEMPHIS
 HUGHES, ALLEN HOLT, MEMPHIS
 # HUGHES, JAMES GILLIAM, MEMPHIS
 # HUGHES, JOHN DAVIS, MEMPHIS
 # HUGHES, MAX, MEMPHIS
 HUGHES, ROBT RULE, MEMPHIS
 HUMMEL, JOHN VERNON, MEMPHIS

HUMPHREYS, ROBERT A, MEMPHIS
HUNT, JAMES CALVIN, MEMPHIS
HUNTER, SAM L E, MEMPHIS
HUTCHINS, CHAS EDWARD, MEMPHIS
HUTCHINS, LINDA FAYE L, MEMPHIS
IGNACZAK, THOMAS F, MEMPHIS
IJAMS, JOE HARTLEY, MEMPHIS
ILABACA, PATRICIA A, MEMPHIS
* INGLE, CHAS WM, MEMPHIS
INGRAM, ALVIN JOHN, MEMPHIS
INMAN, PATRICIA SUE, MEMPHIS
IRWIN, ROBERT BRYSON, MEMPHIS
JABBOUR, C EUGENE, MEMPHIS
JACKSON, STEPHEN WILLIAM, MEMPHIS
JACKSON, THOS M, MEMPHIS
JACOBS, ARTHUR ELLIOTT, MEMPHIS
JALLERALLI, PANDORANGA, MEMPHIS
JAMES, HAL REARSON, MEMPHIS
JARRED, LUIS KATHERINE, MEMPHIS
JARRETT JR, CHAS LESLIE, MEMPHIS
JACHLER, GERARD W, MEMPHIS
JENKINS, GEORGE W, MEMPHIS
JENKINS, JON CALVIN, MEMPHIS
JENKINS, MARTIN B, MEMPHIS
JENNINGS, SUSAN E, MEMPHIS
JENKINS, GERALD RAY, MEMPHIS
JDE, PENN QUORR, MEMPHIS
JOHNSON, JAMES GIBB, MEMPHIS
JOHNSON, LARRY HOLLIDAY, MEMPHIS
JOHNSON, MICHAEL B, MEMPHIS
JONES JR, QUITMAN W, MEMPHIS
JONES JR, SIDNEY O, MEMPHIS
* JONES, ALBERT MITCHELL, MEMPHIS
JONES, DOUGLAS EDGAR, MEMPHIS
JONES, JOE PAUL, MEMPHIS
JONES, R LUBY, MEMPHIS
JONES, ROBT RILEY, MEMPHIS
* JULICH, ARTHUR WILSON, MEMPHIS
JUSTIS, E JEFF, MEMPHIS
KAPLAN, EDWARD STEVEN, MEMPHIS
KAPLAN, JERRY, MEMPHIS
KAPLAN, ROBT JOEL, MEMPHIS
KAPLAN, STANLEY BARUCH, MEMPHIS
KARKERA, MUHANDAS S, MEMPHIS
KASSEES WAHIO, LAILA, MEMPHIS
KASSELBERG, LYMAN A, MEMPHIS
KATZ, GILBERT MARVIN, MEMPHIS
KELLETT, GARY LEDN, MEMPHIS
KELLEY, BOBBY JERALD, MEMPHIS
* KELLY, ERNEST GEO, MEMPHIS
KELLY, RICHARD T, MEMPHIS
KENDRICK, R MARK, MEMPHIS
KENNEODY, MICHAEL B, MEMPHIS
KERLAN, ROBT ASHLEY, MEMPHIS
KESSLER, HENRY G, MEMPHIS
KHANDEKAR, ALIM, MEMPHIS
KHANDEKAR, SOPHIA HAQUE, MEMPHIS
KIEFER, PATSY R, MEMPHIS
KILEDJIAN, VARTKES, MEMPHIS
KIMBALL, NOAH BRADEN, MEMPHIS
KING JR, WILLIAM SCOTT, MEMPHIS
KING, BILLY W, MILLINGTON
* KING, CHAS MACK, MEMPHIS
* KING, JOHN C, MEMPHIS
KINGTON, JOHN MICHAEL, MEMPHIS
KIRK, MARIAM MARTIN, MEMPHIS
KIRKLEY, JOHN BEAUCHAMP, JONESBORO, AR
KIRKPATRICK, ROBT DEAN, MEMPHIS
KISABETH, ROBERT M, MEMPHIS
KISBER, RICHARD H, MEMPHIS
KITABCHI, ABAS EQBAL, MEMPHIS
KLEIER JR, ERNEST ROBBY, MEMPHIS
KLINE, ROBT PAUL, MEMPHIS
* KLODTZ, WM F, MEMPHIS
KNOTT, DAVID HOWARD, MEMPHIS
KNOWLES, JENNIFER S, MEMPHIS
KNOX, ROBT L, MEMPHIS
KOLFYNI, ASGHAR, MEMPHIS
KONIGSBERG JR, CHARLES, MEMPHIS
KDONCE, MARSHALL LYNN, MEMPHIS
* KORONES, SHELDON BERNARR, MEMPHIS
* KOSSMANN, CHAS E, MEMPHIS
KRAUS, ALFRED PAUL, MEMPHIS
KRAUS, MELVIN M, MEMPHIS
KRISLE JR, JOE RICHARD, MEMPHIS
KROETZ, FRANK WM, MEMPHIS
KRONENBERG, JOEL T, MEMPHIS
KULP, ROY, MEMPHIS
KUYKENDALL JR, NATHANIEL, MEMPHIS
KUYKENDALL, CARY M, MEMPHIS
KYLE, JOS WARREN, MEMPHIS
LABONTE, ROGER S, MILLINGTON
LAMAR JR, LUCIUS M, MEMPHIS
LANOSEE, CARL GEO, MILLINGTON
LANGFORD JR, C THOMAS, MEMPHIS
LANGSTON, JAMES WILSON, MEMPHIS
LANKFORD, WM ALEXANDER, MEMPHIS
LARIMER, PERRY JAMES, MEMPHIS
LARKIN, CHARLES NEWTON, GERMANTOWN
LASTER JR, ROBT EUGENE, MEMPHIS
* LATHAM, FRANK A, MEMPHIS
LATHRAM JR, MARVIN W, MEMPHIS
LAUGHLIN JR, ALBERT E, MEMPHIS
LAUGHLIN SR, ALBERT E, MEMPHIS
LAVELLE JR, HERMAN G, MEMPHIS
LAWRENCE, JESSE ALVAH, MEMPHIS
LAWSON, ROBT EDWARD, MEMPHIS
LAWSON, RONALD D, MEMPHIS
LAZAR, EDWARD HARRY, MEMPHIS
LEBOVITZ, M A, MEMPHIS
LEE, LING HONG, MEMPHIS
* LEFKOVITS, AARON M, MEMPHIS
LEMMI, HELIO, MEMPHIS
LEMONDS, MIKE EDWARD, MEMPHIS
LEUNG, RICHARD KIN FOOK, MEMPHIS
LEVENSON, DAVID E, GERMANTOWN
LEVINSON, MICHAEL JAY, MEMPHIS
LEVITCH, MELVYN ABRAHAM, MEMPHIS
LEVY, JOE S, MEMPHIS
LEWIS JR, LAWRENCE C, MEMPHIS
LEWIS, MYRON, MEMPHIS
* LEWIS, PHILIP M, MEMPHIS
LIEBERMAN, PHILLIP LOUIS, MEMPHIS
LINDER, HILARY FRANCIS, MEMPHIS
LINDERMOTH, JOHN R, MEMPHIS
LING, FRANK W, MEMPHIS
LIPSCOMB, ALYS H, MEMPHIS
LIPSEY, GEO GARTLEY, MEMPHIS
LIPSHITZ, JEFFREY, MEMPHIS
LITCH JR, MELVIN, MEMPHIS
LITTLE JR, WM ROBT, MEMPHIS
* LIVERMORE JR, GEO R, MEMPHIS
* LOCKWOOD JR, QUOLEY G, HERNANDO, MS
LONDON, JERRY FRANK, MEMPHIS
* LONG, CHAS EDWARD, MEMPHIS
LONG, THOMAS E, MEMPHIS
LONG, WM E, MEMPHIS
LOUGHEED, JDS C, MEMPHIS
LOVE, VARNA MAE PEYTON, MEMPHIS
LOVEJOY, GEO S, MEMPHIS
LOVING, MARTHA A, MEMPHIS
LUTHER, ROBT WAYNE, MEMPHIS
LYNCH, MICHAEL HARDY, MEMPHIS
MARRY JR, EDWARD HAYS, MEMPHIS
MABRY, EDWARD HAYS, MEMPHIS
MACKAY, WM FREDERICK, MEMPHIS
MADDOUX, HOLT BENJ, MEMPHIS
MADLOCK, LAWRENCE E, MEMPHIS
MADUSKA, ALBERT LOWELL, MEMPHIS
MAGEE, MICHAEL JDS, NEW YORK, NY
MAGILL, HUBERT LYNN, MEMPHIS
* MAGUDA, THOS ANDREW, VENICE, FL
MAGUIRE, JAMES K, MEMPHIS
* MALONE II, WM B, MEMPHIS
MANOELL, ALAN I, MEMPHIS
MANKIN, JOHN C, MEMPHIS
MANN, JAMES ALAN, MEMPHIS
MANNING, PATSY RUTH, MEMPHIS
MANUGIAN, ARSEN, MEMPHIS
MARIENCHECK, WM IRVIN, MEMPHIS
MARKER, HOWARD WM, MEMPHIS
* MARKLE, PHILIP METRIC, MEMPHIS
MARSHALL, DANIEL P, MEMPHIS
MARSHALL, JAMES HOWARD, MEMPHIS
MARSHALL, MICHAEL RALPH, MEMPHIS
* MARTEN, GEO W, MEMPHIS
MARTIN, DANIEL C, MEMPHIS
MARTIN, ROY WAYNE, MEMPHIS
MASON, WM W, MEMPHIS
MASSENGILL, JAMES KEVIN, MEMPHIS
MASSIE, JAMES D, MEMPHIS
MATHES, GORDON LAWRENCE, MEMPHIS
MATHIS, ERNEST H, MEMPHIS
MATTHEWS, OLIVER S, MEMPHIS
MAURY JR, WM P, MEMPHIS
MAYER, RAYMOND FRANKLIN, MEMPHIS
MAYFIELD, LEROY H, MEMPHIS
MAYS, KIT SANFORD, MEMPHIS
MC AFEE, JAMES EARL, MEMPHIS
MC BURNEY, ROBT POWERS, MEMPHIS
* MC CALL, JOHN WM, MEMPHIS
MC CARTER JR, JOHN G, MEMPHIS
MC CAUGHAN JR, JOHN JOE, MEMPHIS
MC CLOY, RANDOLPH M, MEMPHIS
MC CLURE, JAMES G, MEMPHIS
MC CORMACK, HAROLD ARTHUR, MEMPHIS
MC COWN, LOUIS K, MEMPHIS
MC CUBBIN, JACK H, MEMPHIS
MC EWAN JR, ROBT C, MEMPHIS
MC GEE, JOHN LAWRENCE, MEMPHIS
MC GREW III, FRANK A, MEMPHIS
MC KENZIE, EUGENE EATON, MEMPHIS
* MC KINNEY, JAMES W, MEMPHIS
MC LARTY, ALEXANDER M, MEMPHIS
MC LARTY, BARNEY ESTES, MEMPHIS
MC LEMDRE JR, THOS E, MEMPHIS
* MCCOOL, D C, MEMPHIS
MCCONALD JR, ROBERT E, MEMPHIS
MCDONALD, MARTHA W, MEMPHIS
MCKENNA, WILLIAM ROBERT, HARLINGER, TX
MCNEFEY JR, SAMUEL G, MEMPHIS
MERIWETHER III, THOS W, MEMPHIS
METZGER, WM EDGAR, MEMPHIS
MEYER JR, ALPHONSE H, MEMPHIS
MEYER, DAVID, MEMPHIS
MILES, ROBT MILLARD, MEMPHIS
MILFORD JR, LEE WATSON, MEMPHIS
MILLER JR, GEO L, MEMPHIS
MILLER, FOUNTAIN FOX, MEMPHIS
* MILLER, HAROLD RAY, MEMPHIS
MILLER, JOE HAROLD, MEMPHIS
MILLER, JOSEPH BAYARD, MEMPHIS
MILLER, RICHARD ALVAH, MEMPHIS
MILLER, RICHARD B, MEMPHIS
MILLER, RICHARD D, WEST MEMPHIS, AR
* MILLER, RICHARD WALLACE, MEMPHIS
MILLER, THOMAS IVA, MEMPHIS
MILLIS, JAMES MICHAEL, MEMPHIS
MILLS, GEO T, MEMPHIS
MILNDR JR, J PERVIS, MEMPHIS
MINKIN, IRVING C, MEMPHIS
MIRVIS, DAVID MARC, MEMPHIS
MITCHELL, NANCY A, MEMPHIS
MITCHOM, WM ROBSON, MEMPHIS
MOAK JR, JOSEPH SAML, BROOKHAVEN, MS
* MOBLEY, EVERETT C, MEMPHIS
MUELLER JR, BENJ A, EADS
MOFFATT III, WILLIAM LEE, MEMPHIS
MOFFATT JR, WM LEE, MEMPHIS
MOGAN, EDWARD NENON, MEMPHIS
MOINUDDIN, MUHAMMED, MEMPHIS
MOINUDDIN, SHAMIM, MEMPHIS
MOLINSKI, EDWARD M, MEMPHIS
MONAGHAN, THOMAS W, MEMPHIS
MONGER JR, RALPH HORACE, MEMPHIS
MOORE JR, FONTAINE B, MEMPHIS
* MOORE JR, MOORE, MEMPHIS
MOORE, DAVID F, MEMPHIS
MOORE, JAMES A, MEMPHIS
MOORE, MARION ROBERTSON, MEMPHIS
MORENO, FRANCISCO G, MEMPHIS
MORETZ JR, WILLIAM HENRY, MEMPHIS
MORRIS, JOHN THOS, MEMPHIS
MORRIS, WM RANDOLPH, MEMPHIS
MORRISON, BEVERLY J, MEMPHIS
MORRISON, LARRY BURT, MEMPHIS
MORSE, WM HAL, MEMPHIS
MOSER, DAVID O, MEMPHIS
MOSHIER, WM HILL, MEMPHIS
* MOSKOWITZ, HENRY, DANVILLE, VA
MOSS, JOHN PALMER, MEMPHIS
* MOSS, THOS CHESTER, MEMPHIS
MOSS, WM BENJ, MEMPHIS
MOTLEY, THOMAS EARL, MEMPHIS
MOUSTAFA, SALWA, MEMPHIS
MROZ, CHRISTINE T, MEMPHIS
MUIRHEAD, ERNEST ERIC, MEMPHIS
MURDOCK, WADE THOS, MEMPHIS
* MURREY, FRANCIS, NAPLES, FL
MURPHY JR, JOHN T, MEMPHIS
MURPHY, CYNTHIA DABNEY, MEMPHIS
MURPHY, JAMES GARNETT, MEMPHIS
MURPHY, PATRICK J, MEMPHIS
MURPHY, WALTER HENRY, MEMPHIS
MURPHY, WM MONT, MEMPHIS
MURRAH JR, WM FITZHUGH, MEMPHIS
MURRAY, IAN FARRELL, MEMPHIS
MYERS, WM STANLEY, MEMPHIS
NADEL, ALAN MARC, MEMPHIS
NAG, SUBIR K, MEMPHIS
NANNEY, JAMES MICHAEL, MEMPHIS
NARAYANAN, MANOJ, MEMPHIS
NASH, JOHN PAUL, MEMPHIS
NAWAF, KAYS, MEMPHIS
NEAL, WILMER LEWIS, MEMPHIS
NEELY JR, CHAS LEA, MEMPHIS
NEWMAN, LARRY BERNARD, MEMPHIS
NICHOLS, ROBERT EUGENE, MEMPHIS
NICHOLS, THOS WOODELL, MEMPHIS
NICHOPoulos, GEORGE C, MEMPHIS
* NICKSON, JAMES JDS, MEMPHIS
NIELL, HARVEY BARRETT, MEMPHIS
NIKOLDVSKI, OLIVER T, MEMPHIS
NOBLES JR, EUGENE RODMAN, MEMPHIS
NOE, HOKACE NORMAN, MEMPHIS
* NORMAN, ROBT SIOENEY, GERMANTOWN
NORTH, WM C, MEMPHIS
NORTHERN JR, WM L, MEMPHIS
NOVICK, MARK O, MEMPHIS
O'CONNELL, JOHN F, MEMPHIS
O'SULLIVAN, PATRICK JDS, MEMPHIS
* DELKER, DONALD WILSON, MEMPHIS
OGLE, EVELYN M BASSI, MEMPHIS
* OGLE, WM SANDERS, MEMPHIS
OGLESBY, CLAUDE DUNN, MEMPHIS
OKRAH, AMOS, MEMPHIS
* OLIM, CHAS BURTON, MEMPHIS
* ORMAN, JDS COOKE, MEMPHIS
ORPET JR, P E, MEMPHIS
OSBORN, FRANK JACKSON, MEMPHIS
OSWALO, WM J, MEMPHIS
OUTLAN, JOHN EDWARD, COLLIERSVILLE
OUTLAN, WILLIAM F, COLLIERSVILLE
OWENS, JAMES HARVEY, MEMPHIS
OWENS, SCOTT E, MEMPHIS
* PACKER, HENRY, MEMPHIS
PAGE, GENE RUFFNER, MEMPHIS
PAGE, ROY CALVIN, MEMPHIS
PAGIOIPATI, DEVAIAH, MEMPHIS
PAINTER, MAX WESLEY, MEMPHIS
PALMER IV, ROBERT E, MEMPHIS
PALMIERI, GENARD MIGUEL A, MEMPHIS
PARKER, JDS, MEMPHIS
PARROTT JR, CHAS WM, MEMPHIS
PARSONS III, WARD CHESTER, MEMPHIS
* PASTER, SAML, SANTAMONICH, CA
RASTERNACK, MORRIS, MEMPHIS
RATE, JAMES W, MEMPHIS
PATEL, MOHANLAL L, MEMPHIS
RATTERSON III, RUSSELL H, MEMPHIS
RATTERSON JR, RUSSELL H, MEMPHIS
PATTERSON, KELLY, MEMPHIS
PATTERSON, RUSHTON EUGENE, MEMPHIS
RATTERSON, SAM POLK, MEMPHIS

PATTERSON, STANLEY MARTIN, MEMPHIS
PAUL, RAPHAEL NATHAN, MEMPHIS
PEACE, ROBERT JOS, MEMPHIS
PEARSON, RICHARD MCQUISTON, MEMPHIS
PEUGD, PHILLIP ADLER, MEMPHIS
* PEELER, MOLLY MCPFAKE, COVINGTON
PEEPLES JR, JOHN D, MEMPHIS
PENDER JR, JOHN VINCENT, MEMPHIS
PERRY, EDGAR EMRICH, MEMPHIS
PETERS, THOMAS GUY, MEMPHIS
PETTIT JR, PAUL NESMITH, MEMPHIS
PHELPS, WM CHAS, MEMPHIS
PHILLIPS, JERRY CLOYE, MEMPHIS
* PHILLIPS, WM EARL, MEMPHIS
PHOTOPULOS, GUY J, MEMPHIS
PIAN JR, MAURICE C, MEMPHIS
PIGOTT, JOHN D, MEMPHIS
PINALS, ROBERT S, MEMPHIS
PINSON, E LOUISE, MEMPHIS
PINSTEIN, MARTIN LFE, MEMPHIS
PITCOCK, JAMES ALLISON, MEMPHIS
* PITTS, PAUL W, MEMPHIS
PLATKIN, ALAN BAILEY, MEMPHIS
PLITMAN, GERALD IRA, MEMPHIS
POLLNOW, ROBERT E, MEMPHIS
* POOL, ROBT MC CAUGHRIN, MEMPHIS
* PORTER, COLUMBUS HASSELL, MEMPHIS
PORTER, HUEY HENDERSON, MEMPHIS
PORTER, WM RICHARD, MEMPHIS
POUSEY, MICHAEL EVANS, MEMPHIS
POWELL, CARROLL E, COLLIEPVILLE
PRICE, CAROLYN COLPEPPER, MEMPHIS
PRICE, JAMES HOWARD, MEMPHIS
PRIDGEN, STEPHEN ALLEN, MEMPHIS
PRIOTEN, WM RDBY, MEMPHIS
PRIETO JR, LUIS CARLOS, MEMPHIS
* PRITCHARD, FRANCES E, GERMANTOWN
PROCTOR, RUSSELL JAY, MEMPHIS
PUTMAN, BILLIE HAROLD, MEMPHIS
QUINN III, PETER JOS, MEMPHIS
* QUINN, BAYARD PAUL, MEMPHIS
RADA III, JOHN B, MEMPHIS
RAGHAVIAH, N V, MEMPHIS
RAHMAN, MAHFUZUR, MEMPHIS
RAINER, J KENYON, MEMPHIS
RAINES, RICHARD BROONAX, MEMPHIS
* RAINES, SAM LUCAS, MEMPHIS
* RAINEY, WM THOS, MEMPHIS
* RAMANATHAN, JAYA, MEMPHIS
RAMANATHAN, KODANGUDI B, MEMPHIS
RAMEY III, DANL KANDOLPH, MEMPHIS
RANDOLPH, JERRY F, MEMPHIS
KANDOLPH, PAUL DOUGLAS, MEMPHIS
KAO, BHASKAR NARAYAN, GERMANTOWN
KAO, PAIDIPALLI B, MEMPHIS
RAWTANI, PALLAVI V, MEMPHIS
RAY, MORRIS WILLIAM, MEMPHIS
REAVES, EDWARD MC CORMICK, MEMPHIS
* REEDMAN, JOHN JONES, MEMPHIS
* REED, CHESTON MURRAY, MEMPHIS
REED, EDWARD WILSON, MEMPHIS
REED, MARK LOYD, MEMPHIS
REEDER, ROBT CANADA, MEMPHIS
KEESE JR, HARVEY C, MEMPHIS
REESE, HALDEN EUGENE, MEMPHIS
REISSER JR, JOHN MILTON, MEMPHIS
* REISSER, JOHN RANDOLPH, MEMPHIS
RENTROP, WALTER ANTON, MEMPHIS
RENTROP, WM EMIL, MEMPHIS
REYNOLDS, GARY LYNN, MEMPHIS
RHEA JR, HAL S, MEMPHIS
* RHEA SR, HAL SALE, MEMPHIS
RHODES JR, CHAS THOS, MEMPHIS
RICHARDSON JR, ROBT LEE, MEMPHIS
RICHARDSON, ELBERT GREER, MEMPHIS
RICHARDSON, TOMMIE MACK, MEMPHIS
RIGGS JR, WM WEBSTER, MEMPHIS
RIGGS, CHAS R, MEMPHIS
RILEY, FRANCES OSBORN, MEMPHIS
ROANE, JOURDAN ARCHIBALD, MEMPHIS
ROBBINS JR, SAMUEL GWIN, MEMPHIS
ROBBINS, SAM L, MEMPHIS
* ROBERTS, FRANK L, MEMPHIS
ROBERTSON, JAMES THOS, MEMPHIS
ROBERTSON, JON HUBSON, MEMPHIS
ROBINSON JR, CHAS G, MEMPHIS
ROBINSON JR, JOHN EDWARD, MEMPHIS
ROBINSON, JAMES A, MEMPHIS
ROBINSON JR, LOWELL RENJ, MEMPHIS
ROCKETT, JOHN FREDERICK, MEMPHIS
* ROGERS, GORDON K, MEMPHIS
RUJAS, NORBERTO, MEMPHIS
* RONEY, RONALD STEVEN, MEMPHIS
ROSEN, GERALD MICHAEL, MEMPHIS
ROSENBERG, ELIAS WM, MEMPHIS
ROSENBERG, ZACHARY, MEMPHIS
RUSSENSWEIG, JACOB, MEMPHIS
RUTSCHILU, JOSEPH A, MEMPHIS
RUCH JR, WALTER ALLWEIN, MEMPHIS
RUCH, ROBT MILTON, MEMPHIS
RUDNER JR, HENRY GORDON, MEMPHIS
RULEMAN, CHESTER ALLAN, MEMPHIS
RUNYAN JR, JOHN WM, MEMPHIS
RUSSELL JR, JOHN MURRAY, MEMPHIS
RUSSO, WM LOUIS, MEMPHIS
RUTSCHMAN, JULIAN LEANDER, MEMPHIS
RYAN JR, GED MARION, MEMPHIS
SACKS, HAROLD SAMUEL, MEMPHIS
SAFLEY JR, CHAS FRANKLIN, MEMPHIS
SAGE, ERED P, MEMPHIS
SAINO, JAMES D, MEMPHIS
SALAZER, DORGE E, MEMPHIS
SALKY, NATHAN KALMON, MEMPHIS
SAMMONS JR, LEHMAN CLARK, MEMPHIS
SAMUELS, ALAN DANL, MEMPHIS
SANDER, CRAIG J, MEMPHIS
* SANDERS, SAM HOUSTON, MEMPHIS
SANDORU JR, JACK CARTER, MEMPHIS
SANFORD, DAVID MARSHALL, MEMPHIS
SATTERFIELD JR, WM T, MEMPHIS
SAUTER, ROBERT F, GERMANTOWN
SCHAEFER JR, SANDEFORD J, MEMPHIS
SCHAEFER, DONALD EARL, MEMPHIS
SCHAEFER, HARRY IVAN, MEMPHIS
* SCHEINBERG, DAVID ERSHL, MEMPHIS
* SCHETTLER, BETTY J, MEMPHIS
SCHETTLER, WM HEYMOORE, MEMPHIS
SCHLESINGER, VICTOR ADLER, MEMPHIS
SCHOTTLE JR, G PHILLIP, MEMPHIS
* SCHREIER, PHILLIP CHAS, MEMPHIS
* SCHROEDER, HARRIET L, MEMPHIS
* SCHROFE, JEROME, MEMPHIS
* SCHWARTZ, STANLEY SIMON, MEMPHIS
* SCORBY JR, EUGENE C, MEMPHIS
SCOTT III, BENJ F, MEMPHIS
* SCOTT III, DANIEL JOYNER, MEMPHIS
SCOTT JR, DANIEL J, MEMPHIS
* SCOTT, CLARENCE B, HOLIVAR
SCOTT, EDWIN LEE, MEMPHIS
SCOTT, JOS MANSON, MEMPHIS
SCOTT, RANDALL LEE, MEMPHIS
SEALE, JAMES L, MEMPHIS
* SEALS, JAMES LEE, MEMPHIS
SEBES, JEND IMRE, MEMPHIS
SEGAL, ANTHONY, MEMPHIS
SEGAL, JACK, MEMPHIS
SEGAL, MAURICE P, MEMPHIS
* SEGERSON, EDWARD C, MEMPHIS
* SELIGSTEIN, MILTON B, MEMPHIS
* SEXTON, RAY DWEN, MEMPHIS
* SHAH, BHUPENDRA N, MEMPHIS
SHAPIRO, NORMAN D, MEMPHIS
SHAPPLEY JR, WM VANCE, MEMPHIS
* SHAW SR, JOHN LYLE, MEMPHIS
SHEA JR, JOHN JOS, MEMPHIS
SHEA JR, MARTIN COYLE, MEMPHIS
SHEARIN, ROBT P N, MEMPHIS
SHEFFIELD, WM E, MEMPHIS
SHELL III, DAN H, MEMPHIS
SHELTON, BRIEY R, MEMPHIS
* SHELTON, JAMES R, HEBER SPRINGS, AR
SHERROD II, ROME, MEMPHIS
* SHERROD, ALLEN T, MEMPHIS
SHIFFMAN, STEPHEN MURRAY, MEMPHIS
SHIVELY, JOHN ADRIAN, MEMPHIS
SHUMAKE, LESLIE BOWLIN, MEMPHIS
SIEGEL, JEROME SEYMOUR, MEMPHIS
SIEGEL, SAUL, MEMPHIS
* SILER JR, THOMAS T, MEMPHIS
SILVERMAN, MICHAEL N, MEMPHIS
SIMMONS, JAMES C H, MEMPHIS
SIMPKINS, SIDNEY M, MEMPHIS
SIMPSON, JAMES W, HICKORY WITHE
SIMS, CLIFFORD W, MEMPHIS
SISK, THOS DAVID, MEMPHIS
* SISSMAN, PAUL R, MEMPHIS
SKAGGS, MARVIN RICHARD, MEMPHIS
* SKINNER, EDWARD FOLLAND, MEMPHIS
SLAWSON JR, HENRY THOS, MEMPHIS
SLUTSKY, AVRUN ABE, MEMPHIS
* SMILEY, LINDA MARIE, MEMPHIS
* SMITH JR, HUGH MILPY A, MEMPHIS
SMITH JR, VERNON I, MEMPHIS
SMITH, CLOYE GAYLON, MEMPHIS
SMITH, GALEN RICHARD, GERMANTOWN
SMITH, KIRBY LEE, MEMPHIS
* SMITH, RICKY ALLEN, MEMPHIS
SMITH, STANLEY L, MEMPHIS
SMITH, VINCENT D, MEMPHIS
SMITH, W CHAPMAN, MEMPHIS
* SMYTHE JR, FRANK WARD, MEMPHIS
SNIODER, CHARLES VAN, MEMPHIS
SNYDER, DOWEN ERVIN, MEMPHIS
SUHM, JOHN J, MEMPHIS
SOLLEE JR, ARTHUR NEYLE, MEMPHIS
SULOMITO, VINCENT LEE, MEMPHIS
SOLOWAY, MARK STEPHEN, MEMPHIS
SPALDING, ALANSON R, MEMPHIS
SPIDITA JR, EUGENE J, MEMPHIS
SPIDITA, EUGENE JUS, MEMPHIS
SPIDITA, LARRY B, MEMPHIS
* SPRUNT, DOUGLAS H, MEMPHIS
* SKIPAM, GANESAN, MEMPHIS
STANFORD, CARL COOPER, MEMPHIS
STANFORD, JAMES FRANKLIN, MEMPHIS
STANLEY JR, THOS V, MEMPHIS
STARK, RAY GINGLES, MEMPHIS
STAR, JASON LEONARD, MEMPHIS
STEPP, WM PRICE, MEMPHIS
STERN, THUS NEUTON, MEMPHIS
STEVENSON, CLEO WILSON, MEMPHIS
STEVENSON, EDWARD N, MEMPHIS
STEVENSON, RUBIN NALCOLM, MEMPHIS
* STEWART, MARCUS JEFFERSON, MEMPHIS
STEWART, SHERRILL RRYCF, MEMPHIS
STODDY, JAMES CLAYTON, MEMPHIS
* STOVALL, THOMAS GREGORY, MEMPHIS
* STRAIN, SAML FREDERICK, MEMPHIS
STRASBERG, GARY DAVID, MEMPHIS
STRATTON, HENRY THOS, MEMPHIS
STUBBLEFIELD, ROBT J, MEMPHIS
SULLIVAN, JAY MICHAEL, MEMPHIS
SULLIVAN, JOS ALBERT, MEMPHIS
* SUMMERS, WILLIAM DAVID, MEMPHIS
SUMMITT, ROBERT LAYMAN, MEMPHIS
SUTHERLAND III, ARTHUR J, MEMPHIS
* SUTLIFF, WHEELAN D, MEMPHIS
SWEENEY, PATRICK JOHN, MEMPHIS
SYNDOR, ELMER W, MEMPHIS
TABOR, OWEN BRITT, MEMPHIS
TACKET, HALL SANFORD, MEMPHIS
TAG, ARNOLD R, MEMPHIS
* TALLEY, BYRON SHADRACH, MEMPHIS
TANENBAUM, MARK HARRIS, MEMPHIS
TAYLOR III, HERBERT A, MEMPHIS
TAYLOR JR, WM WOOD, MEMPHIS
TAYLOR, DONALD A, MEMPHIS
TAYLOR, EDWIN OSCAR, MEMPHIS
* TAYLOR, ROBT CLARKE, MEMPHIS
TEAGUE, PAUL FORD, MEMPHIS
TEJWANI, INDURANI A, MEMPHIS
TEMPLETON, JOHN WAGGONER, MEMPHIS
TEMPLETON, TERRY P, MEMPHIS
TERHUNE, RONALD LYTLE, MEMPHIS
* THOMAS III, OSWALD H, MEMPHIS
THOMAS JR, LLOYD R, MEMPHIS
THOMPSON, PAUL ANDREW, MEMPHIS
THOMPSON, TERRY L, MEMPHIS
THRELKELD, WM CLEAGE, MEMPHIS
TICKLE, SAML MILTON, MEMPHIS
TIELENS, DON RAYMON, MEMPHIS
TUNKIN, ALLEN K, MEMPHIS
TUNKIN, INA L O, MEMPHIS
TODMS, ROBT EDWIN, MEMPHIS
TOSH, JOHN WILLIAMS, MEMPHIS
TOWNES, ALEXANDER S, MEMPHIS
TOWNSEND III, ARTHUR M, MEMPHIS
TRAUTMAN, ROBERT J, MEMPHIS
TREW, GARY F, MEMPHIS
* TRIMBLE, STEVEN, MEMPHIS
* TRIPP, ALVIN BRUSH, MEMPHIS
* TRUMBULL, MERLIN LEE, MEMPHIS
TUBERVILLE, AUDREY WHALEY, MEMPHIS
TULLIS JR, I FRANK, MEMPHIS
TULLIS, KENNETH FRANK, MEMPHIS
TURLEY III, JOHN C, MEMPHIS
TURLEY JR, HUBERT KING, MEMPHIS
TURLEY JR, JOHN C, MEMPHIS
TURMAN, PRENTISS A, MEMPHIS
TURNBULL JR, STEVE H, MEMPHIS
* TURNBULL, RANDOLPH A, MEMPHIS
TURNER, GEO RANDOLPH, MEMPHIS
TURNER, JAMES T, MEMPHIS
TURNER, JAN LEWIS, MEMPHIS
TYLER, LOUIS EDWARD, MEMPHIS
TYLER JR, AUSTIN ROY, MEMPHIS
* TYSON JR, WM T, MEMPHIS
UPSHAW, JAMES JERRY, MEMPHIS
UPSHAW, JEFFERSON DAVIS, MEMPHIS
USDAN, DAVID AARDN, MEMPHIS
UTKOV, EDMUND S, MEMPHIS
* VACCARO, EUGENE A, MEMPHIS
VAN FUSSEN, HELEN KEY, MEMPHIS
* VANHOOSER, BETTY JANE, MEMPHIS
* VARNER, CLAUDE EERRELL, MEMPHIS
VERNER, WALTER EUGENE, MEMPHIS
VICK, FOWARD GRANT, FT RICHEY, FL
VICK, SIDNEY D, MEMPHIS
VIDER, MANUEL, MEMPHIS
VIFRON, LEONIDAS NICHOLAS, MEMPHIS
VILVARAJAH, VISUVALINGAM, GERMANTOWN
VINCENT, JOHN ROBT, MEMPHIS
* VINDSON, JANICE MARIE, COLUMBIA
VOOKLES, JOHN THORN, MEMPHIS
WADE, DAVID EVERETT, MEMPHIS
WADE, W BURKE, MEMPHIS
* WAKE, ROBERT WILLIAM, MEMPHIS
WAKHAM, JAMES DALE, MEMPHIS
WALKER JR, PARKS W, MEMPHIS
WALKER JR, WM W, MEMPHIS
WALKER, FRANCES CAROLYN, MEMPHIS
WALKER, JAMES WAKEFIELD, MEMPHIS
* WALKER, LILLIE C, LITTLE SWITZLAND, NC
WALKER, RICHARD PARISH, MEMPHIS
WALLACE, FRED C, MEMPHIS
* WALLACE, JAMES ASHFORD, MEMPHIS
WALLACE, PETER B, MEMPHIS
WANDERMAN, RICHARD G, CORDOVA
WAROLAW, LEE LYLE, MEMPHIS
* WARR III, OTIS SUMTER, MEMPHIS
WARR, OTIS S, MEMPHIS
WATKINS, WM W, MEMPHIS
WEBB JR, WILLIAM L, MEMPHIS
WEBBER, BEN PORTER, MEMPHIS
WEBER III, ALVIN JULIAN, MEMPHIS
WEBER, BILL CARL, MEMPHIS
WEEMS, JEROME J, MEMPHIS
WEEMS, JOS LELL, MEMPHIS
WEEMS, THUS DOYLE, MEMPHIS
WEIR JR, ALVA ROWEN, MEMPHIS
WEISS, JOSEPH F, MEMPHIS
WELDEN, STEPHEN WARD, MEMPHIS
WELLS, VAN HENRY, MEMPHIS
* WENER, SAML I, MEMPHIS

WENNEMARK, JAMES R, GERMANTOWN
WERNER, MARY FRANCES, MEMPHIS
WESBERRY, JESSE MALPASS, MEMPHIS
WEST, HAROLD MAXELL, MEMPHIS
WEST, THOS LA FOLLETTE, MEMPHIS
WEST, WILLIAM H, MEMPHIS
WESTMORELAND, DANIEL K, MEMPHIS
WEXLER, RAYMOND H, MEMPHIS
WHEAT, WENDELL T, GERMANTOWN
WHEELER, WAYNE B, PORTSMOUTH, OH
WHETSELL JR, WILLIAM D, MEMPHIS
WHITAKER, JOHN NICHOLAS, MEMPHIS
WHITE III, THOS JEFFERSON, MEMPHIS
WHITE JR, JAMES HAROLD, MEMPHIS
WHITE, CHAS EDWARD, MEMPHIS
WHITE, FRANK LOUIS, MEMPHIS
WHITE, WM GUERIN, MEMPHIS
WHITEHEAD, WM JERRY, MEMPHIS
WHITTINGTON, GENE L, MEMPHIS
WHITLOCK, LAWRENCE WAYNE, MEMPHIS
WHITTEMORE, WENDELL L, MEMPHIS
WHITTLE, THOMAS BARTON, OAK RIDGE
WIECK, JOSEPH ANTHONY, MEMPHIS
WIENER, ISADORE DAVIO, MEMPHIS
WIENER, ROBT ALAN, MEMPHIS
WILDER, WM WIGGINS, MEMPHIS
WILHITE, JOE LYNN, MEMPHIS
WILKINSON, EPHRIAM BAILEY, MEMPHIS
WILLIAMS, BEVEKLY JEAN, MEMPHIS
WILLIAMS, CRAIG W, MEMPHIS
* WILLIAMS, HORACE GLENN, MEMPHIS
WILLIAMS, JAMES WARREN, MEMPHIS
WILLIAMS, LANE PORTER, MEMPHIS
WILLIAMS, LINKWOOD, MEMPHIS
WILLIAMS, PAUL HERBERT, MEMPHIS
WILLIAMS, ROBT O B, MEMPHIS
* WILLIAMS, TERRY JEFF, GARLAND, TX
WILLS, GORDON LEE, MEMPHIS
WILSON JR, JAMES EDWARD, MEMPHIS
WILSON, ARTHUR JAMES, MEMPHIS
WILSON, DONALD BRUCE, MEMPHIS
WILSON, HARRY WILLIAMSON, MEMPHIS
* WILSON, JAMES E, MEMPHIS
WILSON, JOHN MC CULLOUGH, MEMPHIS
WILSON, JOHN MC QUISTON, MEMPHIS
WILSON, RAYMOND EDWARD, MEMPHIS
WISE, MERRILL SHEPPARD, MEMPHIS
WITHERINGTON III, JAMES B, MEMPHIS
* WITHERINGTON, JAMES B, MEMPHIS
WITHERSPOON JR, FRANK G, MEMPHIS
WOLF, RDONEY YALE, MEMPHIS
WUMACK, CLARA RUTH, MEMPHIS
WOOD II, GEORGE W, MEMPHIS
WOOD, MATTHEW A, MEMPHIS
WOOD, THOS OVAL, MEMPHIS
WOODALL JR, JESSE C, MEMPHIS
WOODBURY, GEO ROBT, MEMPHIS
WOODBURY, LINDA L PLZAK, MEMPHIS
* WOODLEY, CLIFTON WARD, MEMPHIS
WOOTEN, RICHARD LINSEY, MEMPHIS
WORK, RICHARD MACNAUGHTON, MEMPHIS
WORKMAN JR, CLAUDE H, MEMPHIS
WORRELL, JERRY LEWIS, MEMPHIS
WRENN JR, EARLE L, MEMPHIS
WRIGHT II, PHILLIP F, MEMPHIS
WRIGHT JR, FRED GRAVES, MEMPHIS
WRIGHT JR, LEONARD D, MEMPHIS
WRIGHT, DANA JOHN, MEMPHIS
WRIGHT, TERRY LYNNE, NASHVILLE
WRURLE, LAWRENCE DAVID, MEMPHIS
* WUPZBURG, HENRY, MEMPHIS
YAGER, JOHN G, GERMANTOWN
* YATES, CLAUDE FRANK, MEMPHIS
YATES, LINDA KAY, CORDOVA
YOUNG JR, JOHN O, MEMPHIS
YOUNG, JACK G, MEMPHIS
YUKON, GORDON, MEMPHIS
ZANELLA JR, JOHN, MEMPHIS
ZANONE, MICHAEL T, MEMPHIS
ZARRUCK, PAULA SUZANNE, KNOXVILLE
ZEE, PAULUS, MEMPHIS
* ZUSSMAN, HERNARD M, MEMPHIS

MONROE COUNTY MEDICAL SOCIETY

ALLEN, JAMES LESTER, SWEETWATER
BARNES, JAMES HAROLD, SWEETWATER
CASEY, ROBERT REID, SWEETWATER
EVANS, THOMAS S, SWEETWATER
GETTINGER, JOSHUE S, MADISONVILLE
HARVEY, WILLIAM L, MADISONVILLE
HYMAN JR, ORREN WILLIAMS, SWEETWATER
LEVIN, BARBARA ANN, MADISONVILLE
LOWRY, FRANK H, MADISONVILLE
LOWRY, TELEORO A, SWEETWATER
MC GUIRE, HOKACE MOHLER, MADISONVILLE
NESS, JAMES A, TELlico PLAINS
SNYDER, EDWARD DUNCAN, SWEETWATER

MONTGOMERY COUNTY MEDICAL SOCIETY

ATKINSON, EDWARD R, CLARKSVILLE
AUSTIN III, RICHARD B, CLARKSVILLE
BARRETT, R T, CLARKSVILLE
BELLENGER, JAMES E, CLARKSVILLE
BOYD, ALTON REUTHER, CLARKSVILLE
BREWER, CARLOS R, CLARKSVILLE

BUSBEE III, GREER ALBERT, CLARKSVILLE
BUSH, JDEL GREGORY, CLARKSVILLE
CARRIGAN, VERDND M, CLARKSVILLE
CHDW, P P, CLARKSVILLE
CUNNINGHAM JR, THDS M, CLARKSVILLE
DDANE JR, SAML N, CLARKSVILLE
DOTY JR, ROBERT D, CHAMPMANSBORO
DURRETT JR, DAWSON W, CLARKSVILLE
FARRAR, JAMES THDS, CLARKSVILLE
FAUST, LARRY M, CLARKSVILLE
* GREEN, MACK MACON, CLARKSVILLE
* GRIEFIN, V H, CLARKSVILLE
GULLETT, DAVID LAIRD, CLARKSVILLE
HALL, BILLY T, CLARKSVILLE
HALL, MICHAEL STANLEY, CLARKSVILLE
HAMPTON, JAMES EDWARD, CLARKSVILLE
HONG, DOUG UN, CLARKSVILLE
HUDSON III, WILLIAM D, CLARKSVILLE
HUDSON, ROBERT W, CLARKSVILLE
IGLEHART, BRYAN T, CLARKSVILLE
JORDAN, EDWIN CONSTANTINE, CLARKSVILLE
KENNEDY, HOWARD P, CLARKSVILLE
KOEHN JR, ROBT C, CLARKSVILLE
KURITA, GEORGE I, CLARKSVILLE
LEDRETT, BUEORO B, CLARKSVILLE
LEE, ROBT HENRY, DOVER
LEMDINE, ERITZ E, CLARKSVILLE
LETT, JAMES C, ERIN
LIGON, DOUGLAS WISTER, ERIN
LIMBAUGH JR, JAMES W, CLARKSVILLE
LOWE JR, REGINALD S, CLARKSVILLE
LOTON, OAKLUS SAML, CLARKSVILLE
LYLE, WM GREEN, CLARKSVILLE
MARTIN, DANIEL ERNEST, ERIN
MC CAMPRELL, FRANK G, CLARKSVILLE
MILAM, JAMES ROBT, CLARKSVILLE
MILES JR, JOS WM, CLARKSVILLE
MITCHUM, ALBERT JACKSON, ERIN
MONTGOMERY, TONY JOHNSON, CLARKSVILLE
MOREHEAD, V TUPPER, CLARKSVILLE
PEACHER, TERRY GENE, CLARKSVILLE
PEOIGO, WILLIAM J, CLARKSVILLE
PERALES, ANGEL U, MADISON
PETERSON, KEITH D, CLARKSVILLE
PORTER, DOUGLAS DWIGHT, CLARKSVILLE
PRINE JR, WM WESLEY, CLARKSVILLE
RICHARDSON, DONALD RAY, CLARKSVILLE
* ROSS, JOHN W, CLARKSVILLE
SILER, RITA ANNE, CLARKSVILLE
SILVEY, GARY LYNN, CLARKSVILLE
SMITH, JAMES RDY, CLARKSVILLE
SPANN, JANICE B, CLARKSVILLE
TITUS III, WILLIAM P, CLARKSVILLE
VANN, HAROLD FRANCIS, CLARKSVILLE
VERMILLION, R J, CLARKSVILLE
WALKER, J R, CLARKSVILLE
WALL JR, WM H, CLARKSVILLE
WIRKING, RONALD K, CLARKSVILLE
WILSON, FRANK, CLARKSVILLE
WOODALL, JESSE C, TRENTON, KY
WRIGHT JR, JOHN FAY, CLARKSVILLE
YOUNG JR, RICHARD WILSON, CLARKSVILLE

NASHVILLE ACADEMY OF MEDICINE/ DAVIDSON COUNTY MEDICAL SOCIETY

ABISELLAN, EDUARDO E, NASHVILLE
ABISELLAN, GEORGINA A, NASHVILLE
ACOSTA, ESTRELLA P, MADISON
ACOSTA, PAOLO C, MADISON
ACREE, MAURICE MASON, NASHVILLE
ADAIR, LUTHER B, NASHVILLE
ADAMS JR, ROBT WALKER, NASHVILLE
ADDLESTONE, RONALD R, NASHVILLE
ADKINS, ROBT BENTON, NASHVILLE
AGBONAG, ARNULFO ARAT, MADISON
AL-ABDULLA, ABOUL-SAHIB M, NASHVILLE
ALCANTARA, ILDEFONSO A, NASHVILLE
ALEXANDER JR, CLYDE W, NASHVILLE
ALEXANDER, DAVE A, NASHVILLE
ALEXANDER, PAUL CRAYTON, NASHVILLE
ALFEKY, DAVID O, NASHVILLE
ALFORD JR, WM CUTTER, NASHVILLE
ALLEN JR, JOSEPH H, NASHVILLE
ALLEN, TERRY REYNOLDS, NASHVILLE
ALLEN, VAUGHAN ARTHUR, NASHVILLE
ALLEN, VERNE ELWOOD, NASHVILLE
ALLEY JR, J CLYDE, NASHVILLE
ALLISON, JOE GARY, MADISON
ALPER, BENJ J, NASHVILLE
AMMARELL, ROBERT L, NASHVILLE
ANANDIAH, K M, MADISON
ANDERSON JR, ARTHUR R, NASHVILLE
ANDERSON JR, EDWIN B, NASHVILLE
ANDERSON JR, JAMES E, NASHVILLE
* ANDERSON JR, JAMES S, NASHVILLE
ANDERSON, EDWARD EUGENE, NASHVILLE
ANDERSON, EDWIN B, NASHVILLE
* ANDERSON, ELBRIDGE E, NASHVILLE
ANDERSON, H R, NASHVILLE
ANDERSON, ROBT S, NASHVILLE
ANDERSON, WM CLYDE, NASHVILLE
ANDREWS, GEO WILSON, BRENTWOOD
ARENOALE JR, CHARLES R, NASHVILLE
ARNOLD, FREDRICK S, NASHVILLE
ARNOLD, LARRY TOTTY, NASHVILLE
ARROWSMITH, PETER NOEL, NASHVILLE
ASHER, HARVEY, NASHVILLE
ATHAR, ZILLUR RAHMAN, MADISON
AVANT, GED RAY, NASHVILLE
AVERBUCH, MARK STEPHEN, NASHVILLE
AWONIYI, MOSES A, OLD HICKORY
BACKUS, ELIZABETH MAUREEN, NASHVILLE
BAER, HARRY, NASHVILLE
BAHNER, RUDERICK IREN, NASHVILLE
BAKER, THURMAN OEE, NASHVILLE
BALDWIN, JAMES MARVIN, ASHLAND CITY
BALEDUR, H BRIAN, NASHVILLE
* BALLARD, SIDNEY W, FRANKLIN
BALLINGER, JEANNE F, NASHVILLE
BAN, THOMAS A, NASHVILLE
BANDY, PRESTON H, NASHVILLE
* BARKSDALE, EDWARD H, NASHVILLE
BARNES JR, MAURICE C, NASHVILLE
BARNETT, DONALD R, NASHVILLE
BARNETT, PAUL HAROLD, NASHVILLE
BARNETT, ROBT BURTON, NASHVILLE
BARRETT, JEFFREY M, NASHVILLE
BARTON, DAVIO, NASHVILLE
* BASS, ALLAN OELMAGE, NASHVILLE
BATCHELDR, E OALE, NASHVILLE
BATSON, JACK MILLER, NASHVILLE
BATSON, RANDOLPH, TROY, AL
* BAYER, O SCOTT, NASHVILLE
BEAZLEY JR, LUTHER A, NASHVILLE
BECK, CHAS BERNARD, MADISON
BECK, LARSON OALE, MADISON
BELOEN, RICHARD A, NASHVILLE
BELL, ROBT LE ROY, NASHVILLE
BENDER JR, HARVEY W, NASHVILLE
* BENNETT, LYNCH O, NASHVILLE
HENNING, THOMAS R, KINGSPORT
BENSON, GEORGE N, NASHVILLE
* RENZ, EDMUND WOODWARD, NASHVILLE
BERMAN, M LAWRENCE, NASHVILLE
BERNARD, LOUIS J, NASHVILLE
BERNARD, STANLEY, NASHVILLE
BERRIE, WARREN R, NASHVILLE
BERRY, GEOFFREY, NASHVILLE
BEVERIDGE, JOHN H, NASHVILLE
BIHL-MIRANDA, PATRICIA M, OLD HICKORY
* BILLIG, OTTO, NASHVILLE
BILLINGS JR, FREDERIC T, NASHVILLE
BINKLEY JR, WM JOS, MADISON
BINKLEY, GEO T, NASHVILLE
BIRDWELL, BEN JASON, NASHVILLE
BIRMINGHAM, RUSSELL T, NASHVILLE
BISHOP JR, EUGENE L, NASHVILLE
BISHOP, LINDSAY K, NASHVILLE
BISHOP, MICHAEL ROBT, NASHVILLE
BISTOWISH JR, JOS M, NASHVILLE
BOONER, STANLEY JACOB, HERMITAGE
BOEHM, FRANK HENRY, NASHVILLE
BOLIN, MARION G, NASHVILLE
BOMAR JR, ROBT LYNN, NASHVILLE
BOMBOY JR, JAMES D, NASHVILLE
BOND, ARTHUR GERNT, NASHVILLE
BONO, JOHN BENJ, NASHVILLE
BONOURANT, SIONEY W, NASHVILLE
BONE, ROBERT CARVER, LEHANN
BOOKMAN, JAMES ANDREW, MADISON
BOOTH JR, GLENN H, NASHVILLE
BOTTOMY, MICHAEL BRUCE, NASHVILLE
BOUNOS JR, GED WM, NASHVILLE
BOWERS JR, DAVID GARWOOD, NASHVILLE
BOYO JR, AM JOS, NASHVILLE
* BOYLIN, JOHN M, NASHVILLE
BRACKIN JR, HENRY B, NASHVILLE
* BRADLEY, CLOYCE E, NASHVILLE
* BRADLEY, G HEARN, NASHVILLE
BRAKEFIELD, JAMES MARION, NASHVILLE
BRAREN, H VICTOR, NASHVILLE
BREINIG, JOHN BOYERS, NASHVILLE
BRENNER, DEAN E, NASHVILLE
BRIGHAM, KENNETH L, NASHVILLE
BRIMMER II, ROBERT A, NASHVILLE
BROOKS, ARTHUR L, NASHVILLE
BROOMES, LLOYD RUDY, MADISON
BROTHERS, JOHN CUNNINGHAM, NASHVILLE
BROTHERTON III, WILLIAM O, NASHVILLE
BROWN JR, WALTER EDWARD, SPRING HILL
BROWN JR, WALTER O, NASHVILLE
BROWN, DOUGLAS H, NASHVILLE
BROWN, KERMIT RUPERT, NASHVILLE
BROWN, PHILLIP PENOLETON, NASHVILLE
BROWNE, EDWARD W, NASHVILLE
BRUCE, DONALD, MOREEESBORO
BRUNO III, JOHN, NASHVILLE
* BRYAN, JOHN T, NASHVILLE
* BUCHANAN JR, ROBT NORMAN, NASHVILLE
BUCHANAN, RICHARD DURR, NASHVILLE
BUCKSPAN, GLENN S, NASHVILLE
BUEND, REUREN A, NASHVILLE
* BORD, JOS G, NASHVILLE
BURKHALTER, MICHAEL TERRY, NASHVILLE
BURKS, HELEN CRAWFORD, HENDERSONVILLE
BURNES, JAMES EDMOND, MADISON
BURNETT, LONNIE S, NASHVILLE
BURNS, GERALD ROBT, NASHVILLE
BURR, IAN MEADOWS, NASHVILLE
BURR, ROBT EDWARD, MADISON
BURRUS, GEO ROBT, NASHVILLE
BURRUS, ROGER BYRON, NASHVILLE
BYRO JR, BENJ F, NASHVILLE
CAOENA, GUILLERMO, NASHVILLE

CALOWELL III, THOS B, NASHVILLE
 CALOWELL JR, BENJ H, NASHVILLE
 CALHOUN, CALVIN LEE, NASHVILLE
 CALLAWAY, JAMES J, NASHVILLE
 CAMPBELL, THOMAS W, NASHVILLE
 CAMPBELL, W BARTON, NASHVILLE
 CANALE JR, DANIEL O, NASHVILLE
 CANNON II, RICHARD O, NASHVILLE
 CANNON JR, CHARLES GRADY, NASHVILLE
 CAPLE SR, PHILLIP M, NASHVILLE
 CARO, WM JUDSON, MADISON
 CARLSEN, ANDREW B, NASHVILLE
 CARNEY JR, SAM W, MADISON
 CARPENTER JR, GEO KENYON, NASHVILLE
 CARR, CHAS MORGAN, DONELSON
 CARTER, OSCAR WILLIS, NASHVILLE
 CARTER, ROBERT ASHE, NASHVILLE
 CARTWRIGHT, PETE S, NASHVILLE
 CASSELL, NORMAN M, NASHVILLE
 CASTELNUOVO TEDESCO, P, NASHVILLE
 CATE, RONALD C, NASHVILLE
 CAYCE, LEE F, NASHVILLE
 CAZORT, RALPH J, NASHVILLE
 CHALFANT, ROBT L, NASHVILLE
 CHAMBERS, JILL F, NASHVILLE
 CHANG, PONG MOON, NASHVILLE
 CHANNABASAPPA, KODITHALLI P, MADISON
 CHAPMAN, JOHN EOMON, NASHVILLE
 CHAZEN, ERIC MARTIN, NASHVILLE
 CHEFIZ, ABRAHAM PACHA, NASHVILLE
 CHEN, LILY HEIOI, NASHVILLE
 CHIKKANNAIAH, SAJJAN G, GOODLETTSVILLE
 CHRISTIANSEN, SIDNEY G, NASHVILLE
 * CHRISTIE, AMOS, NASHVILLE
 CLARK, WM MC LEAN, NASHVILLE
 CLASSEN, JEANNINE ARCHER, NASHVILLE
 CLASSEN, KENNETH LEDN, MADISON
 CLINTON, MARY E, NASHVILLE
 CLOSE, LOUIS WARD, NASHVILLE
 COBB JR, CULLY A, NASHVILLE
 COCHRAN, ROBT TAYLOR, NASHVILLE
 COHEN, ALAN GARY, NASHVILLE
 COKER, WESLEY LOUIS, NASHVILLE
 COLES III, JOHN H, NASHVILLE
 CONNOR, DAN E, NASHVILLE
 COOK, WILLIAM A, HOUSTON, TX
 COOKE, GEO EDWARD, NASHVILLE
 COOPER, ROBERT S, NASHVILLE
 COOPWOOD, WM EUGENE, MADISON
 COPPOLETTI, RICHARD T, ROCKFORD, IL
 CORBIN JR, CHARLES, NASHVILLE
 CORNEY, ROBT TYLER, NASHVILLE
 * COTHREN, FREDERIC B, DOLTEWAH
 COTHREN, JACKSON DANL, NASHVILLE
 COTTON JR, ROBERT BELL, NASHVILLE
 COUCH JR, ORRIE A, NASHVILLE
 COUDEN, VINCENT ROBT, DONELSON
 COULAM, CRAIG M, NASHVILLE
 COWDEN, CHAS MARSHALL, HENDERSONVILLE
 COWDEN, FREDERIC EUGENE, NASHVILLE
 CRAFT, LISA T, NASHVILLE
 CRAFTON, GEO B, NASHVILLE
 CRANE, JOS MICHAEL, MADISON
 CRANE, PAUL SHIELDS, NASHVILLE
 CRECRAFT, HAROLD JAMES, NASHVILLE
 CRENSHAW, RANDALL W, NASHVILLE
 CRENSHAW, WM BRYANT, NASHVILLE
 CROOK, ANGUS M G, NASHVILLE
 CROOK, JERRALL PAUL, NASHVILLE
 CUNNINGHAM, LOUIS ERNEST, NASHVILLE
 CUSHMAN, ARTHUR ROBT, MADISON
 DALE, W ANDREW, NASHVILLE
 DANIELL, JAMES F, NASHVILLE
 DANIELS, CHARLES W, NASHVILLE
 DAO, ANH HUU, NASHVILLE
 DABBY, WM JEFFERSON, NASHVILLE
 DAUGHERTY, PHILIP V, NASHVILLE
 DAVIS JR, THOS JOEL, NASHVILLE
 DAVIS, CARLA SUZANNE M, NASHVILLE
 DAVIS, EVELYN J, NASHVILLE
 DAVIS, GEO WM, NASHVILLE
 DAVIS, IVAN R, NASHVILLE
 DAVIS, JOHN L, NASHVILLE
 DAVIS, MICHAEL DAVID, NASHVILLE
 DAVIS, RICHARD JOHN, NASHVILLE
 * DAVIS, THEODORE W, NASHVILLE
 DAVIS, WM GRAY, MADISON
 DE BLANC JR, HAROLD J, NASHVILLE
 DEAN, RICHARD HENRY, NASHVILLE
 DEASON, DEBORAH R, NASHVILLE
 DELANEY, THOMAS PATRICK, NASHVILLE
 DELVAUX JR, THOS C, NASHVILLE
 DENNISON JR, HAROLD CLAY, NASHVILLE
 DICKINSON, CHRISTINE Z, NASHVILLE
 DILLARD JR, SAML HENRY, NASHVILLE
 DIXON JR, JOHN H, NASHVILLE
 DOAK, WM MELVILLE, DONELSON
 DOOD, ROBERT T, NASHVILLE
 DONALD, WM D, NASHVILLE
 DONNELL, MARK L, MADISON
 DOPP, ALAN C, NASHVILLE
 * DORRIS, EARL DENTON, NASHVILLE
 DOSS, W GORDON, HENDERSONVILLE
 DOUGHERTY, ROBERT T, NASHVILLE
 * DOUGLASS, HENRY L, NASHVILLE
 DOWNEY, WM LEE, NASHVILLE
 * DOWNS, HOWARD S, MADISON
 DOYLE, DEBORAH R, NASHVILLE
 DOYNE, MARK ALAN, NASHVILLE
 DOZIER JR, J EMMETT, NASHVILLE
 DRIVER JR, L ROWE, NASHVILLE
 DUBUISSON, RAY L, NASHVILLE
 DUDLEY, B STEPHEN, HOUSTON, TX
 DUNCAN, GARY WM, NASHVILLE
 DUNCAN, GEO E, NASHVILLE
 DUNCAN, THOMAS C, NASHVILLE
 DUNN, MARY CATHERINE, HENDERSONVILLE
 DUNKERLEY JR, ROBT C, NASHVILLE
 DUNN, GEO DEWEY, NASHVILLE
 DURANT, SHARON J, NASHVILLE
 DUTTON, WM PATTERSON, NASHVILLE
 ECKSTEIN, CHARLES W, NASHVILLE
 EDGAR SR, ANDREW S, NASHVILLE
 EDWARDS, DORAN DEYON, NASHVILLE
 EDWARDS, JOE MICHAEL, NASHVILLE
 EDWARDS, ROBT HARVEY, NASHVILLE
 EDWARDS, WM H, NASHVILLE
 ELAM III, ROY OSCAR, NASHVILLE
 ELAM, LLOYD CHAS, NASHVILLE
 ELLIOTT, JAMES H, NASHVILLE
 * ELLIOTT, PHILIP C, NASHVILLE
 ELLIS, JAMES W, NASHVILLE
 ELSON, MELVIN LESLIE, NASHVILLE
 EMERSON, CLIFTON W, NASHVILLE
 ENTMAN, STEPHEN S, NASHVILLE
 ERYASA, YILMAZ, NASHVILLE
 ESCOBAR, ALFONSO, NASHVILLE
 ESKINO, IRWIN BERNARD, NASHVILLE
 ESTES, ROBERT L, NASHVILLE
 ESTES, TAFT HORACE, NASHVILLE
 EVANS JR, OWEN B, NASHVILLE
 EVANS, HILLIS FLOREN, MADISON
 EWEERS, E WILLIAM, NASHVILLE
 EYLER, DON LEROY, NASHVILLE
 EZELL, ROY CLAY, NASHVILLE
 EABER, ROBT BRANCH, NASHVILLE
 FAKHRUDDIN, A K M, MADISON
 FALK, LESLIE ALAN, NASHVILLE
 FARRAR, WM TAYLOR, NASHVILLE
 FARRINGER JR, JOHN LEE, NASHVILLE
 * FARRIS, WILLIAM B, BRADENTON, FL
 FAULK JR, WALLACE H, NASHVILLE
 FAULKNER, CHAS TAYLOR, NASHVILLE
 FELCH, JAMES W, FRANKLIN
 FELOMAN, RICHARD WARREN, NASHVILLE
 EELTS, PHILIP W, NASHVILLE
 FELTS, STEPHEN KAREY, HERMITAGE
 FEMAN, STEPHEN S, NASHVILLE
 FENICHEL, GERALD MERVIN, NASHVILLE
 FERGUSON, HAROLD AUSTIN, NASHVILLE
 * FESSEY, RAY O, NASHVILLE
 * FIDELHOLTZ, JACOB NORMAN, NASHVILLE
 FIELDS, JAMES P, NASHVILLE
 FIELDS, JOHN PERSHING, NASHVILLE
 FINK, GARY ELIOT, NASHVILLE
 FINKE, FREDERICK LEROY, NASHVILLE
 * FINKS, ROBT MARK, NASHVILLE
 FISHBEIN, JOS H, NASHVILLE
 FISHER, BENJ, NASHVILLE
 * FISHER, LAURA M, FT LAUDERDALE, FL
 * FITZWATER JR, JAMES E, SAN FRANCISCO, CA
 FLEET JR, WILLIAM F, GOODLETTSVILLE
 FLEISCHER, ARTHUR C, NASHVILLE
 FLEMING JR, JAMES H, NASHVILLE
 FLEMING JR, ROSS, NASHVILLE
 FLEXNER, JOHN MORRIS, NASHVILLE
 FOREMAN, HOWARD R, NASHVILLE
 FOSTER, HENRY WENDELL, NASHVILLE
 * FOSTER, JOHN H, NASHVILLE
 FOSTER, NELSON RAY, FRANKLIN
 FOWINKLE, EUGENE WESLEY, NASHVILLE
 FOWLER, SAML B, NASHVILLE
 * FRANCE, RICHARD, NASHVILLE
 FRANCIS, ROBT STANLEY, NASHVILLE
 FRANCIS, RUPERT ASHTON, NASHVILLE
 FRANKLIN, JERRY M, NASHVILLE
 FREDERIKSEN, RAND TERRELL, NASHVILLE
 FREEMAN, RUEUS JACK, NASHVILLE
 FRENCHMAN, KHUSHRU H, HENDERSONVILLE
 FREY, WALTER WILLIS, NASHVILLE
 FRIEDL, THOS JAMES, NASHVILLE
 FRIESINGER, GOTTLIEB C, NASHVILLE
 FRIST JR, JOHN C, NASHVILLE
 FRIST, ROBT ARMISTEAD, NASHVILLE
 * FRIST, THOS F, NASHVILLE
 * FROELICH, E EDWIN, NASHVILLE
 FULKERSON JR, WILLIAM J, NASHVILLE
 FURMAN, JOHN ROBERT, MADISON
 GAINES, DONALD LEE, NASHVILLE
 * GANT, JULIAN C, LOMA LINDA, CA
 GARONER, CHAS KURTIN, NASHVILLE
 * GARDNER, JAMES COLLIE, NASHVILLE
 GARMAN, RICHARD W, NASHVILLE
 GARRETT, SAM YOUNG, NASHVILLE
 GASKINS, FAY M, NASHVILLE
 GASTON JR, ROBERT B, NASHVILLE
 GASTON, ROBT B, DONELSON
 GAVIGAN, WM MITCHEL, NASHVILLE
 GAW, DAVID WISDOM, NASHVILLE
 GAW, WILLIAM RICHARD, NASHVILLE
 GEODIE, DANL CLARK, NASHVILLE
 GENCA, EROL, NASHVILLE
 GENTRY, CARLO LEFFEL, MADISON
 GESSLER, CARL NEWTON, NASHVILLE
 GHOSH, KRISHNA DEVI, NASHVILLE
 GIBSON, JOHN RAGAN, NASHVILLE
 GIBSON, RICHARD L, NASHVILLE
 GILL, CHAS MC CLELLAND, NASHVILLE
 GILMER, RONALD, ST LOUIS, MO
 GLASCOCK, FRANK B, NASHVILLE
 GLASSCOCK, MICHAEL E, NASHVILLE
 GLASSFORD JR, DAVID M, NASHVILLE
 GLICK, ALAN DOUGLAS, NASHVILLE
 GLOVER JR, JOHN P, NASHVILLE
 GLUCK JR, FRANCIS W, NASHVILLE
 GIBBEL JR, WALTER G, NASHVILLE
 GOLDNER JR, FRED, NASHVILLE
 GOLLOBIN, GLENN, NASHVILLE
 GOMEZ, PAUL CHAS, NASHVILLE
 GOWDA, HIRANYA C K, NASHVILLE
 GRABER, ALAN LEE, NASHVILLE
 GRAHAM JR, LOUIS S, NASHVILLE
 GRAHAM, THOMAS P, NASHVILLE
 GRANO, ANTONIO MEDARDO, NASHVILLE
 GRANT, BURTON PAINE, NASHVILLE
 GRAVES JR, HERSCHEL A, NASHVILLE
 GRAY, GEORGE F, NASHVILLE
 GRAY, ROLAND WILLIAM, NASHVILLE
 GRECO, FRANK ANTHONY, NASHVILLE
 GREEN JR, PAUL A, NASHVILLE
 GREEN, EOMON LEE, NASHVILLE
 GREEN, JAMES DONALD, NASHVILLE
 * GREEN, LOUIS O, NASHVILLE
 GREEN, NEIL EDWARD, NASHVILLE
 GREENBAUM, RALPH MARTIN, NASHVILLE
 GREENE, HARRY LEE, NASHVILLE
 GREENE, JOHN W, NASHVILLE
 GRER JR, CLIFTON E, NASHVILLE
 GREGG, CLARK R, NASHVILLE
 GREGORY II, JAMES P, NASHVILLE
 GREGORY JR, MARVIN GEER, NASHVILLE
 GREGORY, DAVID WILSON, NASHVILLE
 GREMILLION JR, DANIEL E, NASHVILLE
 GRIFEIN, JOHN JOS, NASHVILLE
 GRIFEITH JR, JOHN W, NASHVILLE
 GRINER, WINSTON H, NASHVILLE
 GRISCOM, JOHN HOOPER, NASHVILLE
 GROOS, ERICH BRYAN, NASHVILLE
 GROSSMAN, LAURENCE A, NASHVILLE
 GROSSMAN, MILTON, NASHVILLE
 GROVE, R BARRY, NASHVILLE
 GROWDON JR, JAMES HAROLD, NASHVILLE
 * GUILDFORD, JAMES H, NASHVILLE
 GUPTON JR, WM EDWIN, NASHVILLE
 GUTOW, GARY SAML, NASHVILLE
 GUTOW, RICHARD FINEMAN, NASHVILLE
 HABER JR, ARNOLD, NASHVILLE
 HAGAN, GEO BRYANT, MADISON
 HAGAN, KEITH W, NASHVILLE
 * HAILEY, DAVID WALTER, NASHVILLE
 * HAINES JR, CHAS EDGAR, NASHVILLE
 HAINSWORTH, JOHN O, NASHVILLE
 HALEY JR, ROBT LEO, MADISON
 HALL JR, WALLACE EDWARD, NASHVILLE
 HALL, HUGH DAVID, NASHVILLE
 HALPRIN, GERALD MYRON, NASHVILLE
 HALTON, THOS BRANSON, NASHVILLE
 HAMBERG, MARCELLE ROBT, NASHVILLE
 HAMILTON, CHAS M, NASHVILLE
 HAMILTON, JAMES RICHARD, NASHVILLE
 * HAMILTON, WM M, NASHVILLE
 HAMMON JR, JOHN W, NASHVILLE
 HAMMONS, ROY GLENN, NASHVILLE
 HANDTE, ROBERT E, NASHVILLE
 HANES, THOMAS EUGENE, MADISON
 HANSEN, AXEL CARL, NASHVILLE
 HARDEN, V ANTHONY, RUSSELLVILLE, AR
 HARDIN, ROBT ALLEN, NASHVILLE
 HARDY, ROBERT E, NASHVILLE
 HARRIS, JACKSON, NASHVILLE
 HARRIS, JEFFREY S, NASHVILLE
 HARRIS, PERRY FELTON, NASHVILLE
 HARTMANN, WM HERMAN, NASHVILLE
 HARVEY, ALEXANDER EARLE, NASHVILLE
 HARWELL JR, WM BEASLEY, NASHVILLE
 HARWELL, AUBREY B, NASHVILLE
 HASTY, NORMAN DONALD, NASHVILLE
 * HAYES, JAMES T, MADISON
 HAYNES JR, J BREVARD, NASHVILLE
 HAYNES, JAMES HUGH, NASHVILLE
 * HAYNIE, H CAMPBELL, BRENTWOOD
 HAYS, JAMES WM, NASHVILLE
 HEFLIN, A CLOYE, NASHVILLE
 HEIM, CRAIG REED, NASHVILLE
 HELLER, RICHARD MOSS, NASHVILLE
 HELME, JAMES B, NASHVILLE
 HENDERSON, ROBERT R, NASHVILLE
 HENRY, DOUGLAS C, NASHVILLE
 HERRINGTON JR, JOHN L, NASHVILLE
 * HERZFELD, JOHN G, NASHVILLE
 HESTER, RAY WILLIS, NASHVILLE
 HIBBETT III, BASIE K, NASHVILLE
 * HIBBITTS JR, JOSIAH B, NASHVILLE
 HIGH, JAMES MARSHALL, MADISON
 HIGHTOWER, DANL RUSSELL, NASHVILLE
 HILL, WARREN THOS, HENDERSONVILLE
 HILL, WM HAROLD, MADISON
 HILLARD, IRVING RINGO, NASHVILLE
 HILLS, EDWARD RUODOLPH, NASHVILLE
 HINES, STEPHEN L, NASHVILLE
 HIRSHBERG, CHAS SNYDER, NASHVILLE
 HITCHMAN, JAMES KENNETH, NASHVILLE
 HOBBOY, CHARLIE JOE, NASHVILLE
 HOLCOMB JR, GEO W, NASHVILLE
 * HOLLABAUGH, CHAS FOWLER, NASHVILLE
 HOLLENOFF, MARC HALE, NASHVILLE
 HOLLIOAY, HUGH DOUGLAS, NASHVILLE

HOLLIEFIELD, JOHN WARD, NASHVILLE
 HOLMES III, GEO LANDIS, NASHVILLE
 HOLZEN, THOMAS W., NASHVILLE
 * HONG, INPOW, APO SAN FRANCIS, CA
 HOOS, RICHARD T., NASHVILLE
 HORN, ROBT GORDON, NASHVILLE
 HOROWITZ, DAVIO HARVEY, NASHVILLE
 HORTON JR, FREDERICK T., NASHVILLE
 HOUSTON, MARK CLARENCE, NASHVILLE
 HOWELL JR, EVERETTE IRL, NASHVILLE
 HOWERTON, HENRY CLAYTON, NASHVILLE
 HSUEH, YERNG TERNG, NASHVILLE
 HUBER, THOS J., MADISON
 HUDDLESTON, CHAS H., NASHVILLE
 HUGGINS, JAMES M., MADISON
 HUFFMAN, WILLIAM R., BRENTWOOD
 HUMPHREYS, JERRY KAY, NASHVILLE
 * HUMPHREYS, LINDA, NASHVILLE
 HUNT, JERRY CHEEK, MADISON
 HUNTER, SAMUEL B., RICHMOND, VA
 HURT, JOS EDWARD, NASHVILLE
 HUSTON, JOSEPH W., NASHVILLE
 HUTTON JR, VERNON, NASHVILLE
 HUTTON, ROBERT M., NASHVILLE
 HYMAN, STEVE A., NASHVILLE
 IKARD, ROBT WINSTON, NASHVILLE
 INTERLANDI, JOHN W., HERMITAGE
 ISAACS, JUANITA JOYCE, NASHVILLE
 ISENHOUR JR, ALBERT P., NASHVILLE
 ISMAIL, MUHAMMED, NASHVILLE
 IVIE, JDS MC KINNEY, NASHVILLE
 JACKSON, C GARY, NASHVILLE
 JACKSON, ROGER THEODORE, NASHVILLE
 JACOBS, JOS KENNETH, NASHVILLE
 JAMES, A EVERETTE, NASHVILLE
 JARVIS, DAVID ALAN, NASHVILLE
 JEKOT, WILLIAM J., NASHVILLE
 JENKINS, GARY W., NASHVILLE
 JENNINGS, HENRY S., NASHVILLE
 JOHN JR, JAMES THOS, NASHVILLE
 JOHNSON JR, IRA T., NASHVILLE
 JOHNSON, ERNEST KAYE, NASHVILLE
 JOHNSON, HARRY KEITH, NASHVILLE
 * JOHNSON, HOLLIS EUGENE, NASHVILLE
 JOHNSON, JAMES WM, NASHVILLE
 JOHNSON, JOHN SETTLE, NASHVILLE
 JOHNSON, ROBT MARSHALL, NASHVILLE
 JOHNSTON, CHAMBLESS RAND, NASHVILLE
 JOHNSTON, ROBT K., NASHVILLE
 JOHNSTON, WILLIAM D., NASHVILLE
 JONES III, HOWARD W., NASHVILLE
 JONES JR, ORRIN LESTER, NASHVILLE
 JONES, BRUCE E., NASHVILLE
 JONES, DAVIO SCOTT, NASHVILLE
 JONES, EDMUND PALMER, NASHVILLE
 JONES, FRANK EMERSON, NASHVILLE
 JONES, JOHN DONALD, NASHVILLE
 * JONES, JOHN R., WILLIAMSBURG, KY
 JONES, PHILLIP R., NASHVILLE
 * JORDAN, THOS MALONE, NASHVILLE
 KAISER, ALLEN B., NASHVILLE
 KAMBAM, JAYAKUMAR REDDY, NASHVILLE
 * KAMPMEIER, RUDDLP H., NASHVILLE
 KAPLAN, HERMAN JACOB, NASHVILLE
 KAPLAN, PETER ROBT, NASHVILLE
 KARZON, DAVIO THEODORE, NASHVILLE
 KASSELBERG, ALFRED GUY, NASHVILLE
 KAUDER, BRUCE M., NASHVILLE
 KEANE, WM SHEKMAN, NASHVILLE
 KEMMERLY, PAUL COURTLAND, NASHVILLE
 * KENOALL, CYRUS ERVE, HENDERSONVILLE
 * KENNEOY, J ALLEN, NASHVILLE
 KENNER III, WM DAVIS, NASHVILLE
 * KENNON JR, WM GILLIAM, NASHVILLE
 KEYES, MICHAEL JOS, NASHVILLE
 KHAN, QAMAR ALI, NASHVILLE
 KILROY, ANTHONY WALDO, NASHVILLE
 KIMBRELL JR, ERED TAYLOR, DONELSON
 KING JR, LLOYD E., NASHVILLE
 KINNARD, JOHN PARKES, NASHVILLE
 KIRRY, LOWRY DALE, NASHVILLE
 KIRCHBERG JR, RDY WM, NASHVILLE
 KIRCHNER JR, FREDERICK K., NASHVILLE
 KIRCHNER, SANDRA LYNNE G., NASHVILLE
 KIRSHNER, HOWARD S., NASHVILLE
 KLINE, KERRY L., NASHVILLE
 KLING JR, RALPH R., NASHVILLE
 KNAPP, DAVIO SOLOMON, MADISON
 KUCHTITZKY, OTTO M., NASHVILLE
 KOENIG, LEONARD J., NASHVILLE
 * KUUNTZ, PAUL D., NASHVILLE
 KOURANY, RONALD FREDERIC, NASHVILLE
 KRAMER, LEE E., GODOLETTSVILLE
 KRONENBERG, MARVIN W., NASHVILLE
 KUZUR, MICHEL ELIAS, NASHVILLE
 KYFTON, JOHN F., NASHVILLE
 KYGER, KENT, NASHVILLE
 LA VOI, SAML JOS, NASHVILLE
 LAMB, JOHN WM, NASHVILLE
 * LAMB, ROLAND D., NASHVILLE
 LAMBERT, FRANK HAYDEN, NASHVILLE
 LATOUR, DANA L., FRANKLIN
 LATOUR, PAUL A., NASHVILLE
 LAUGHLIN, LAWRENCE PAUL, NASHVILLE
 LAVELY JR, HORACE T., NASHVILLE
 LAWRENCE JR, GRANVILLE A., NASHVILLE
 LAWSON, ALBERT ROBT, MURFREESBORO
 LAZARUS, STEPHEN M., SPARTANBURG, SC

LE QUIRE, VIRGIL S., NASHVILLE
 LEE, DAVIO GRANVILLE, NASHVILLE
 LENTZ, JOS ERANCIS, NASHVILLE
 LEONARD, JOHN MARTIN, NASHVILLE
 LESTER, JAMES PEYTON, NASHVILLE
 LEWIS, MALCOLM R., NASHVILLE
 LEWIS, MORRIS S., NASHVILLE
 LIDDLE, GRANT WINDER, NASHVILLE
 LIMBIRO, THOMAS J., NASHVILLE
 LINN, M JOANNE LOVELL, NASHVILLE
 * LINN, MARGARET RUTH, NASHVILLE
 LINN, ROBT J., NASHVILLE
 LIPSCOMB, ALBERT BRANT, NASHVILLE
 LISELLA, RICHARD SCOTT, NASHVILLE
 LODEN, JAMES POPE, NASHVILLE
 LOGAN, JIMMI H., NASHVILLE
 LOGAN, THOS PERCIVAL, NASHVILLE
 LONG, WM ROYSTON, NASHVILLE
 LOVELACE, DONALD RAY, NASHVILLE
 LOYVDON JR, HAROLD N., NASHVILLE
 * LOWE, JACKSON PHILIP, NASHVILLE
 LUBOW, LAWRENCE D., NASHVILLE
 * LYLE, PHILIP LEWIS, NASHVILLE
 LYNCH, JOHN BROWN, NASHVILLE
 MAC MILLAN JR, CHAS W., NASHVILLE
 MACMILLAN, ROBT DUNCAN, NASHVILLE
 MADDEN JR, JAMES JOS, NASHVILLE
 MAGPANTAY, EDMUND O., MT JULIET
 * MAGROOER, ROBT HERMAN, OLD HICKORY
 MAKRANOI, VIJAY RANI, NASHVILLE
 MALCOLM, ARNOLO WM, NASHVILLE
 MALLARO, ROBT ELWOOD, NASHVILLE
 MANALAC SR, ABELARDO Z., MT JULIET
 * MANLOVE JR, WM R., NASHVILLE
 MANNING, DEBORAH A., NASHVILLE
 MARNEY, SAMUEL ROBE, NASHVILLE
 MARSHALL JR, WILLIS H., MADISON
 MARTINEZ, ERLINDA A., NASHVILLE
 MARTINEZ, ROGELIO R., NASHVILLE
 MASON, THOS EMMETT, NASHVILLE
 MASSIE, RALPH W., NASHVILLE
 MAXSON, WAYNE S., NASHVILLE
 MAXWELL, G PATRICK, NASHVILLE
 * MAYER, JAMES A., NASHVILLE
 MAYES, BEN RICHARDSON, NASHVILLE
 MAYES, CHAS EUGENE, NASHVILLE
 MAYNARD, D JERRY, NASHVILLE
 MC CALL, HERBERT TRAVIS, MADISON
 MC CLELLAN, ROBT E., NASHVILLE
 * MC CRACKEN, ROBT LAZEAR, NASHVILLE
 MC GEHEE, JAMES BARTLEY, NASHVILLE
 MC GINNIS, CHAS W., NASHVILLE
 MC GRIFF JR, JAMES E., NASHVILLE
 MC INNIS, JOHN CAMERON, NASHVILLE
 MC KEF, EMBRY ARNOLD, NASHVILLE
 MC KINNEY, THURMAN DWIGHT, NASHVILLE
 MC LEDO, ALEXANDER C., NASHVILLE
 MC MAHAN, JOHN WELLINGTON, NASHVILLE
 MC MURRAY, M CHAS, NASHVILLE
 MC PHERSON, EWING WM, NASHVILLE
 MC PHERSON, WARREN E., NASHVILLE
 MC QUIRTER JR, WROTEN, NASHVILLE
 MCCONNELL, CONN M., MADISON
 MCOANTEL, WILLIAM R., NASHVILLE
 MCEERIN, JAMES R., NASHVILLE
 MCKAY III, CHARLES F., NASHVILLE
 MCKEE, DAVID EARL, MADISON
 MCMURTRY, CECIL E., HENDERSONVILLE
 MCNABB, PAUL CARTER, NASHVILLE
 MEACHAM, WM FELAND, NASHVILLE
 MEADOR, CLIFTON K., NASHVILLE
 MEADORS, MICHAEL H., NASHVILLE
 * MEIROWSKY, ARNOLO MAX, NASHVILLE
 MELKIN, STEPHEN PELLAR, NASHVILLE
 MENOUZA, DANIEL, HENDERSONVILLE
 MENZIE, JAMES W., NASHVILLE
 MERRITT II, CULLEN R., NASHVILLE
 METTS III, VERGIL L., MADISON
 MEYER JR, ALVIN HENRY, DONELSON
 MICHAEL, PAUL R., NASHVILLE
 MILEK, MICHAEL A., NASHVILLE
 MILLER JR, JAMES OLNEY, MADISON
 MILLER, ANDREW HERRON, NASHVILLE
 MILLER, JOE M., NASHVILLE
 MILLER, JOHN M., NASHVILLE
 * MILLER, LLOYD C., NASHVILLE
 MILLER, MICHAEL E., NASHVILLE
 MILLER, MICHAEL PETER, NASHVILLE
 MILLER, THOMAS R., MADISON
 MILLER-EROST, RUTH, NASHVILLE
 MILLIS, JAMES BROWN, DONELSON
 MINCH, E MICHAEL, NASHVILLE
 MINTON, LEE ROY, NASHVILLE
 MIRANO, FERNAND T., OLD HICKORY
 MITCHELL, CARL EDWARD, NASHVILLE
 MITCHELL, DOUGLAS PARK, NASHVILLE
 MITCHELL, EDWIN HARRIS, NASHVILLE
 MOBLEY III, PAUL E., MADISON
 MUGAN, THOS FRANCIS, HENDERSONVILLE
 MULIN, JOHN ALLAN, NASHVILLE
 * MUNEY, ROY WILSON, NASHVILLE
 MONTGOMERY, DEBORAH G., NASHVILLE
 MONTGOMERY, MARCIA A., NASHVILLE
 MONTOURIS, GEORGIA D., NASHVILLE
 MURRE JR, HARRY TAYLOR, NASHVILLE
 MORGAN, DAVIO H., NASHVILLE
 MORDNEY, DAVIO M., NASHVILLE
 MORTON III, CHARLES E., NASHVILLE

MOULTON, PATRICK HOWARD, NASHVILLE
 MOYERS, JAMES RICHARD, NASHVILLE
 MULHERIN JR, JOS LOUIS, NASHVILLE
 * MURRAY, HENRY DARWIN, OLD HICKORY
 NADEAU, JOHN HUGH, NASHVILLE
 NASH, JAMES L., NASHVILLE
 NAOERTHAL, ROBERT LEF, NASHVILLE
 NEBLETT III, WALLACE W., NASHVILLE
 NEFF, BETTY K., NASHVILLE
 NELSON, I ARMISTEAD, NASHVILLE
 NEMEC, DEWEY G., NASHVILLE
 NESBITT, TOM EDWARD, NASHVILLE
 NETSKY, MARTIN GEO, NASHVILLE
 NETTERVILLE JR, JOHN T., BRENTWOOD
 NICHOLS, DARYL L., NASHVILLE
 NISSEN, ALAN J., NASHVILLE
 NOEL JR, PHILIP JORDAN, NASHVILLE
 NOEL, OSCAR E., NASHVILLE
 NORRIS, MARGARET SWANN, NASHVILLE
 NORTH, K TIMOTHY, MADISON
 NORTON, CHAS GLENN, NASHVILLE
 O'BRIEN, KEVIN MICHAEL, NASHVILLE
 O'DAY, DENIS MICHAEL, NASHVILLE
 O'LEARY, JAMES P., NASHVILLE
 OATES, JOHN ALEXANDER, NASHVILLE
 OLDHAM, RICHARD RANDOLPH, NASHVILLE
 OLSON, BARBARA JEAN, NASHVILLE
 ORCUTT, THOS WM, NASHVILLE
 ORLANDO, RICHARD A., NASHVILLE
 ORTH, DAVIO N., NASHVILLE
 * OVERALL, JAMES C., NASHVILLE
 OVERFIELD, RONALD EDWIN, NASHVILLE
 OWEN, ROBT CARROLL, NASHVILLE
 OWNREY, RICHARD PHILLIP, NASHVILLE
 P'POOL JR, DAVID BRUCE, NASHVILLE
 * P'POOL, DAVIO BRUCE, NASHVILLE
 PAGE JR, HARRY L., NASHVILLE
 PAGE, DAVIO LEE, NASHVILLE
 PALACIO DEL VALLE, GUSTAVO, NASHVILLE
 PANLILIO, ADELISA, NASHVILLE
 PARKER, RDY W., NASHVILLE
 PARRIS, WINSTON CLIVE VIC, NASHVILLE
 PARRISH, THOS ERANKLIN, NASHVILLE
 PARTAIN, C LEON, NASHVILLE
 * PASCUA, PERCIVAL G., WICHITA, KS
 PASIPANODYA, ALPHONSO T., NASHVILLE
 * PASS, BERNARD J., NASHVILLE
 PATIKAS, TAKIS, NASHVILLE
 PATTERSON JR, ROBT C., NASHVILLE
 PATTERSON, ARTHUR KNOX, NASHVILLE
 PATTERSON, WARREN R., NASHVILLE
 PEARSON, JOHN G., NASHVILLE
 PECACHE, CONCHITA T., MADISON
 PEERMAN JR, CHAS G., NASHVILLE
 PEERY JR, CLARENCE E., NASHVILLE
 PENDERGRASS, HENRY P., NASHVILLE
 PENNINGTON JR, JEFFERSON, MADISON
 PENNINGTON, THOS G., NASHVILLE
 PERALES, PEDRO JUAN, NASHVILLE
 PERLER, GEO L., NASHVILLE
 PERLMUTTER, MARTIN I., NASHVILLE
 PERRIN, JAMES MARC, NASHVILLE
 PERRY JR, JAMES MURRAY, NASHVILLE
 PERRY, FRANK A., NASHVILLE
 PERRY, LUDWALD O P., NASHVILLE
 PETERS, JOHN EDWARD, NASHVILLE
 PETRIE, WILLIAM M., NASHVILLE
 PETTIT, WM ALBERT, NASHVILLE
 PETTUS JR, ROBT L., MADISON
 * PHELPS, THOMAS F., NASHVILLE
 PHYTHYON, JAMES MARTIN, NASHVILLE
 PICKENS JR, DAVIO R., NASHVILLE
 PIERCE, ELIZABETH P., GODOLFTSVILLE
 PILKINTON, ROBT DALE, MADISON
 PINCUS, DIANA J., NASHVILLE
 PINSON, RICHARD O., NASHVILLE
 PINTO-CISNEPOS, SOCRATES, SMYRNA
 * PITTINGER, CHAS B., NASHVILLE
 PU, OIVINA ONG TAN, HENDERSONVILLE
 PO, GIGG SING TAN, GODOLETTSVILLE
 PUAG, KENNETH LESLIE, NASHVILLE
 * POLINER, LONNIE S., RICHMOND HGTS, MO
 POMEROY, HOWARD CLIFTON, OLD HICKORY
 PORCH JR, PHILLIP P., NASHVILLE
 PORTER, LESTER L., NASHVILLE
 PUTANIN, CONSTANTINE, NASHVILLE
 POTTS, THOS EDWARD, NASHVILLE
 POWELL, JACK P., NASHVILLE
 POWERS, JAMES S., ASHLAND CITY
 PRAGER, RICHARD L., NASHVILLE
 PRESLEY, RICHARD ELOON, NASHVILLE
 PRIOR, HUGH C., NASHVILLE
 PRICE, ANN HUTCHESON, NASHVILLE
 PRICE, JAMES STERLING, NASHVILLE
 PRIEST II, EDWARD M., NASHVILLE
 PUCKETT, JERRY EDWIN, NASHVILLE
 PUMARIEGA, ANOPEA, NASHVILLE
 QUIMBY JR, CHAS WILLIS, NASHVILLE
 QUINN, ROBERT S., NASHVILLE
 QUINN, ROBT W., NASHVILLE
 QUISLING, RICHARD W., NASHVILLE
 QURESHI, MOHAMMAD HUMAYUN, HENDERSONVILLE
 RABIN, DAVIO, NASHVILLE
 * RACKOW, PETER L., NASHVILLE
 RAJASHEKARAIAH, K M, NASHVILLE
 RALPH JR, WM BENNETT, NASHVILLE
 RAMSEY, JAMES ALBERT, NASHVILLE
 RAMSEY, LLOYD H., NASHVILLE

REDDY, CHURKU MOHAN, NASHVILLE
 REES, RILEY S, NASHVILLE
 REGEN JR, EUGENE M, NASHVILLE
 * REGEN, EUGENE MARSHALL, NASHVILLE
 REMBERT, FRANCIS MARION, NASHVILLE
 REMILLARD, JOSEPH H, NASHVILLE
 REMILLAKO, PATRICIA J, NASHVILLE
 RENFRO, ROY JAMES, NASHVILLE
 REYNOLDS, ROBT NELSON, NASHVILLE
 REYNOLDS, VERNON HARRY, NASHVILLE
 * RHEA, EDWARD BULLOCK, OLD HICKORY
 RIBEIRO, LENDR DE SA, NASHVILLE
 * RICE, JOHN RALPH, NASHVILLE
 RICE, RONNIE NFAL, HENDERSONVILLE
 RICHARDS, JAMES PAUL, NASHVILLE
 RICHARDSON, L OUGLAS, NASHVILLE
 RICHIE, ROBT EUGENE, NASHVILLE
 RICKETSON, ROBT A G, NASHVILLE
 RIDGELL, DOUGLAS H, NASHVILLE
 RIPLEY, ROBERT C, NASHVILLE
 * RIPPY, ELKIN LANIER, NASHVILLE
 RIVAS, ALEJANDRO A, OLD HICKORY
 * RIVEN, SAML S, NASHVILLE
 * ROBBINS II, LANSOON B, NASHVILLE
 ROBINETTE JR, CHARLES L, NASHVILLE
 ROBINSON, ROSCOE R, NASHVILLE
 ROCHE, JEFFREY C, NASHVILLE
 ROJAS-BRASSETTI, JORGE, NASHVILLE
 ROSEN, BARRETT FRANK, NASHVILLE
 ROSEN, HOWARD E, NASHVILLE
 * ROSENBLUM, ALVIN B, NASHVILLE
 ROSENBLUM, MARVIN JONAS, NASHVILLE
 ROSENBLUM, SOLOMON A, NASHVILLE
 * ROSENFELD, LOUIS, NASHVILLE
 ROSENTHAL, RONALD EVAN, NASHVILLE
 ROSS M D, JOSEPH C, NASHVILLE
 * ROSS, PEIRCE M, NASHVILLE
 RUWE JR, FRED A, NASHVILLE
 ROY, ROBT M, NASHVILLE
 ROY, SALIL, NASHVILLE
 RUARK, DEBORAH S, HERMITAGE
 RUSSELL, ROBERT VANCE, NASHVILLE
 RUTLEDGE, SAML BENTON, NASHVILLE
 RYDEN, FRED WARD, MADISON
 RYU, CHI YOL, MADISON
 SADLER, ROBT NEIL, NASHVILLE
 SALCEDO, PEPITO YAPIT, MADISON
 SALTER, HOWARD LEE, NASHVILLE
 SAMPSON, LOUIS, NASHVILLE
 SANDERS JR, DAN SUMNER, NASHVILLE
 SANDERS, HARVEY STANFORD, NASHVILLE
 SANDERS, MITCHELL KEITH, NASHVILLE
 SANDERS, RICHARD JAMES, NASHVILLE
 SANDIDGE, PAULA CONAWAY, NASHVILLE
 SANES JR, GILMORE M, HENDERSONVILLE
 SANNELLA, JOS JOHN, NASHVILLE
 SARRATT, MADISON H, NASHVILLE
 SATOR, INOCENTES A, OLD HICKORY
 SATTERFIELD, ROBERT G, DONELSON
 SAWYERS, JOHN L, NASHVILLE
 SAWYERS, JULIA EDWARDS, NASHVILLE
 SAYERS JR, JOSEPH H, NASHVILLE
 SCHEIBERT, CHAS DAVID, NASHVILLE
 SCHILLIG, STEPHEN, NASHVILLE
 SCHNEIDER, RICHARD PAUL, NASHVILLE
 SCHULL, LAWRENCE G, NASHVILLE
 SCHULMAN, HERBERT J, NASHVILLE
 SCHULTHEISS, DAVID EARL, NASHVILLE
 SCHULTZ, MARY L PULLIG, NASHVILLE
 SCHUMAKER, KERRY J, NASHVILLE
 SCHWABER, MITCHELL KEITH, NASHVILLE
 SCHWARTZ, JONATHAN MARTIN, NASHVILLE
 SCHWEIKERT, JOHN ROBT, NASHVILLE
 * SCHWEIKERT, NANCIE, NASHVILLE
 SCOBEE, JOS WILBURN, MADISON
 SCOTT JR, HENRY WM, NASHVILLE
 SCOVILLE JR, ADDISON B, NASHVILLE
 SELL, CHAS GORDON RENNICK, NASHVILLE
 SELL, SARAH HAMILTON WOOD, NASHVILLE
 SERGENT, JOHN STANLEY, NASHVILLE
 SESHUL, MICHAEL BOYD, NASHVILLE
 SEWELL, ROBT ALVIN, NASHVILLE
 SHACKLEFORD, ELBERT C, HENDERSONVILLE
 * SHANOS III, COURTNEY, NASHVILLE
 SHANKLE, NELSON EDWARD, NASHVILLE
 * SHAPIRO, JOHN L, NASHVILLE
 SHERIDAN JR, WILLIAM F, BRENTWOOD
 SHIAD, WEN T, NASHVILLE
 SHIELDS, JOHN ALFRED, NASHVILLE
 SHMERLING, ABRAHAM CARL, NASHVILLE
 * SHORNEY, BRIAN T, NASHVILLE
 SHOULDERS JR, HARRISON H, NASHVILLE
 SHULL JR, HARRISON J, NASHVILLE
 * SHULL, HARRISON J, NASHVILLE
 SHUPE, DAVID RALSTON W, NASHVILLE
 SIKES, J GREGORY, NASHVILLE
 SILBERT, BURTON, NASHVILLE
 * SIMPKINS SR, THOS E, NASHVILLE
 SIMPSON, LUCIEN CALDWELL, NASHVILLE
 SIMS, NORMAN LE MASTER, MADISON
 SINCLAIR SMITH, BRUCE C, NASHVILLE
 SINGH, ALVIN R, MURFREESBORO
 * SKINNER, WILLIAM, NASHVILLE
 SLATON, PAUL ERNEST, NASHVILLE
 SLONECKER, WM THOS, BRENTWOOD
 SMITH JR, GROVER R, NASHVILLE
 SMITH, BRADLEY EDGEPTON, NASHVILLE
 SMITH, BRUCE M, NASHVILLE
 SMITH, CHARLES RAY, NASHVILLE
 SMITH, CHAS BURNETT, NASHVILLE

SMITH, CLYDE WM, NASHVILLE
 * SMITH, DAUGH W, NASHVILLE
 SMITH, HAROLD PATTON, NASHVILLE
 * SMITH, HENRY CARROLL, NASHVILLE
 SMITH, LANGDON G, ANTIOCH
 SMITH, LUTHER EDWARD, NASHVILLE
 SMITH, MARION L, NASHVILLE
 SMITH, MURRAY WILTON, NASHVILLE
 SMITH, PETER GAILLARD, NASHVILLE
 SMITH, RAPHAEL FORD, NASHVILLE
 SMITH, RUDOLPH V, NASHVILLE
 SMITH, RUSSELL R, MADISON
 SMITH, SAMUEL A, NASHVILLE
 SMITH, WM ORVILLE THOS, GOODLETTSVILLE
 SNEEL JR, JAMES O, NASHVILLE
 SNOW, S STEVE, NASHVILLE
 SNYDER, ROBT BRUCE, NASHVILLE
 SOFRANKO, JOS EDWARD, MADISON
 SOMAYAJI, BONTWAL N, NASHVILLE
 SON, CHDON DUCK, MT JULIET
 SOPER, BRENT ALESHIRE, MADISON
 SPALDING, MICHAEL JON, NASHVILLE
 SPICKARD, W ANDERSON, NASHVILLE
 SPIGEL, STUART CHAS, NASHVILLE
 SPROCKIN, BERTRAM F, NASHVILLE
 SPROUSE, DAPHNE, NASHVILLE
 STEIN, ROBT ELLIOT, NASHVILLE
 STEVENS JR, FRANK W, NASHVILLE
 STEVENS, FRANK WILSON, NASHVILLE
 STEWART III, RAOFORD C, NASHVILLE
 STEWART, JAMES D, NASHVILLE
 STEWART, LEE WM, NASHVILLE
 STOCKARD JR, CHARLES G, MADISON
 STONE, WILLIAM JOHN, NASHVILLE
 STONEY, WM SHANNON, NASHVILLE
 STODDER, DENNIS ALAN, NASHVILLE
 STRATTON, CHARLES W, NASHVILLE
 STRAYHORN III, WM DAVID, NASHVILLE
 * STRAYHORN, JOE M, NASHVILLE
 * STRICKLAND, W GARRISON, NASHVILLE
 STRODE, WILBORN D, NASHVILLE
 STROUP, STEVEN L, NASHVILLE
 STUMB, PAUL RUST, NASHVILLE
 STUYVESANT, V WILFRED, MADISON
 SUMPTER JR, WM DAVID, NASHVILLE
 SUNDELL, HAKAN WILHELM, NASHVILLE
 SONGA-GUEVARA, MARIETTA, MADISON
 * SUTHERLAND JR, ARTHUR J, NASHVILLE
 * SUTHERLAND, JOS EDWARD, MADISON
 SUTTON, JERRY SEABORN, NASHVILLE
 SWANSON, GARY O, NASHVILLE
 * SWINGLE JR, ROGER LYNN, NASHVILLE
 * SWITTER, DAVID JOHN, NASHVILLE
 TABER, RICHARD PUTTER, MADISON
 TACOGUE, LLOYD C, NASHVILLE
 TALLENT JR, MARION B, NASHVILLE
 TANNER, JOHN M, NASHVILLE
 * TAPLEY, EDWARD LEWIS, NASHVILLE
 TATE, HARRY T, MADISON
 TATE, STEVEN, NASHVILLE
 TAYLOR, DEAN GATES, NASHVILLE
 TERRY, RICHARD B, NASHVILLE
 * TERRY, ROBT TODD, NASHVILLE
 TESCHAN, PAUL ERHARD, NASHVILLE
 * THACH JR, ANDREW BLAINE, NASHVILLE
 THOMAS JR, CLARENCE S, NASHVILLE
 * THOMAS, CLARENCE S, NASHVILLE
 THOMAS, E DEWEY, NASHVILLE
 THOMBS, DAVID DAWSON, NASHVILLE
 THOMSON JR, JOHN B, NASHVILLE
 THOMSON, JOHN B, NASHVILLE
 THOMSON, RENA M, NASHVILLE
 THOMPSON JR, JOHN G, NASHVILLE
 THOMPSON, WILLIAM R, NASHVILLE
 THORNE, CHAS B, NASHVILLE
 THORNTON, SPENCER P, NASHVILLE
 THURMAN, GRAFTON H, MADISON
 THURMAN, STEPHEN S, NASHVILLE
 TICARIC, STEPHEN THEODORE, MADISON
 TILLEY, KENNETH SHANNON, NASHVILLE
 TIPTON, EDMUND F, NASHVILLE
 TIRAO, BENLYN LYNDIA O, MADISON
 TIRAO, JESUS FERNANDEZ, MADISON
 TIRKILL III, WILLARD D, NASHVILLE
 * TIRKILL JR, WILLARD O, NASHVILLE
 TODD JR, KIRKLAND W, NASHVILLE
 TORMES, FELIX R, MADISON
 TORSTRICK, ROBERT F, JACKSON
 TOSH, ROBT H, NASHVILLE
 * TRABOE IV, CHAS CLAY, NASHVILLE
 TRABUE, ANTHONY E, NASHVILLE
 TRAPP, JOHN DOUGLAS, NASHVILLE
 TRAUGHER JR, LESLIE E, NASHVILLE
 TREADWAY, CHAS RICHARD, NASHVILLE
 TUCKER JR, AUBREY LEE, NASHVILLE
 TUDDER JR, JOHN M, NASHVILLE
 TURNER, BRUCE IRWIN, NASHVILLE
 TURNER, DOROTHY J, NASHVILLE
 URBANEK, ANTHONY P, NASHVILLE
 VALDSIK, ROBERT A, NASHVILLE
 * VAN WERT, JOHN WEST, NASHVILLE
 VANDEVENDER, FRANK KARL, NASHVILLE
 VANHOYDONK, JOHN E, NASHVILLE
 VASTHINDER, EARL EDWARD, NASHVILLE
 * VIEHMAN, ARTHUR J, MADISON
 VINCENT, JAMES L, NASHVILLE
 VORA, PRAVINCHANDRA Z, NASHVILLE
 WADLINGTON, WM B, NASHVILLE
 WAHL, ROBT WILHELM, NASHVILLE
 * WALKER, FTHEL, NASHVILLE

WALLACE, ROOGER TERRY, NASHVILLE
 WALLAS, CHARLES H, NASHVILLE
 WALSH, RAMONA NONDINE, NASHVILLE
 WALWYN, LLOYD ALEXIS, MADISON
 WAMPLER, JOHN MILLARD, NASHVILLE
 WARD JR, JAMES W, MADISON
 * WARD, JAMES WILLIAM, NASHVILLE
 WARD, RUSSELL DORRIS, NASHVILLE
 * WARDER, THOS F, JACKSONVILLE, FL
 WARNER, JOHN J, NASHVILLE
 WARNER, JOHN SLOAN, NASHVILLE
 WASDOEV, GEETA PRAMOD, NASHVILLE
 WASDOEV, PRAMOD B, NASHVILLE
 WATERHOUSE, GEORGE, NASHVILLE
 WAYBORN JR, GATES JORDAN, NASHVILLE
 WEBB, ROBERT T, MADISON
 * WEBSTER, B H, NASHVILLE
 WEINBERG, JANE ROTH, NASHVILLE
 WELLS, CHAS E, NASHVILLE
 WENTZ, ANNE COLSTON, NASHVILLE
 WENTZ, DENNIS KEITH, NASHVILLE
 WESLEY, RALPH E, NASHVILLE
 WHEELER, ARVILLE VANCE, NASHVILLE
 WHITE, ROGER KREIS, NASHVILLE
 WHITFIELD JR, THOMAS C, NASHVILLE
 * WHITFIELD, JOE T, FRANKLIN
 WHITWORTH, THOS CLAYTON, NASHVILLE
 WILKINSON, ERLE EWING, NASHVILLE
 WILKS, HARVEY SAUL, NASHVILLE
 WILLIAMS JR, W CARTER, NASHVILLE
 WILLIAMS, MELBOURNE A, NASHVILLE
 WILLIS, LARRY GALE, NASHVILLE
 WILSON, JAMES PHILLIP, NASHVILLE
 WILSON, WENDELL WINFRED, OLD HICKORY
 WINFIELD, ALAN C, NASHVILLE
 WINTER, EUGEN J, NASHVILLE
 WITHERSPOON, FRANK G, NASHVILLE
 WITHERSPOON, JOHN D, NASHVILLE
 WITTHAUER, NORMAN EVERETT, NASHVILLE
 * WITZTUM, HARRY, LOS ANGELES, CA
 WOLF JR, JOHN STUART, NASHVILLE
 WULFE, LAWRENCE KENNETH, NASHVILLE
 * WDMACK JR, FRANK C, FRANKLIN
 WONG, SONG W, NASHVILLE
 WOOD, ALASTAIR J J, NASHVILLE
 WOOD, GED WALLACE, NASHVILLE
 WOODCOCK JR, CLARENCE C, NASHVILLE
 * WOODFIN, MOSE CLARKE, NASHVILLE
 WOODS, JOHN ROBT, NASHVILLE
 WOODSLEY JR, RAYMOND L, NASHVILLE
 WOOTEN III, N ERIC, NASHVILLE
 WORD, JERRY LEE, NASHVILLE
 * WORMAN III, CLAUDE H, NASHVILLE
 WORMAN, DENNIS CLIFFORD, NASHVILLE
 * WRAY, TAYLOR M, NASHVILLE
 WRIGHT, DORIS JACQUELYN, NASHVILLE
 WRIGHT, JOHN KELLY, NASHVILLE
 WYATT, JOHN L, NASHVILLE
 YATES, DAVID ROBT, DONELSON
 YNARES, CHRISTINA M, NASHVILLE
 ZERFOSS JR, THOS BOWMAN, NASHVILLE
 * ZERFOSS, KATE SAVAGE, NASHVILLE
 * ZERFOSS, THOS B, NASHVILLE
 ZIMMERMAN, CARL WAYNE, NASHVILLE

NORTHWEST TENNESSEE ACADEMY OF MEDICINE

AKINS JR, CHAS WESLEY, UNION CITY
 ALGEE JR, WYATT R, DYERSBURG
 AVERY, JAMES KELLEY, UNION CITY
 * BAIRD, JESSE P, DYERSBURG
 BARKS, THOS V, DYERSBURG
 BEALE, HOBART H, MARTIN
 BLANTON III, MARVIN A, UNION CITY
 BROWN, BRUCE B, UNION CITY
 BUTLER JR, ARDEN JONES, RIPLEY
 BUTLER, HAROLD DEE, UNION CITY
 CAMERON, ROBT LYNN, UNION CITY
 CAMPBELL, JOE, UNION CITY
 CARR, KENNETH, MARTIN
 CARTER, JERRY U, DYERSBURG
 CLENDENIN JR, ROBT E, UNION CITY
 COOK, DAVID CLFO, UNION CITY
 DAVID, WALTER E, DYERSBURG
 DODD, HALBERT B, UNION CITY
 DUNCAN, WM LLOYD, MARTIN
 ESCARCEGA, RODRIGUEZ R, UNION CITY
 FARRIS, LARRY MC NEAL, RIPLEY
 FREEMAN, GORDON, DYERSBURG
 GARY, DAN CARMACK, UNION CITY
 GREEN JR, DANL PARKER, DYERSBURG
 HARRINGTON, ROBT LEE, DYERSBURG
 HAYNES JR, DOUGLAS B, DYERSBURG
 HILL, CHESLEY HESTER, TROY
 HILL, ROBERT PAUL, TROY
 HINDS, MICHAEL, MARTIN
 HOWARD, JOHN D, MARTIN
 INCLAN, AURELIO PETER, DYERSBURG
 JERNIGAN, JERRY MARSHALL, DYERSBURG
 * JETER, ROBT MC KENZIE, GLEASON
 JOHNSON, ELDIETT, DYERSBURG
 JOHNSON, SUSAN MCDANIEL, MARTIN
 * JOHNSON, THOMAS W, KANSAS CITY, MO
 JONES, LAURENCE WALLER, UNION CITY
 KERR, ROBT THOMPSON, DYERSBURG
 KING, ELTON AARON, DYERSBURG
 * KINGSBURY, EDWARD P, UNION CITY
 LATIMER JR, ROBT G, UNION CITY
 LAWRENCE, ROY FINCH, UNION CITY
 LE, CONG, UNION CITY

LEWIS, RODGER PATRICK, UNION CITY
LYERLY, DONALD NEWTON, OYERSBURG
MANNING, J LOUIS, ORESOEN
MOORE JR, OLYN EREN, OYERSBURG
MOORE, JAMES CHALMERS, OYERSBURG
MURPHY, VENABLE ARTIS, TRIMBLE
NOONAN, JAMES ROTHWELL, OYERSBURG
PALACIOS, ESTEBAN JOSE, OYERSBURG
PATRICK, ROBERT G, MARTIN
PAUL MARSIOT MO, UNION CITY
PHILLIPS, WM LEROY, NEWBERN
POLK, JAMES WALTER, UNION CITY
PORTER, IRA EORD, MARTIN
PORTER, NATHAN E, GREENEIELD
RAGSOALE, JAMES HOWARD, UNION CITY
REAVES, JOHN ANDREW, OYERSBURG
REYNOLDS, JAMES RALPH, OYERSBURG
ROBBINS, BILLY GERALD, RIPLEY
RYAN, MICHAEL B, UNION CITY
SANNER, ROBERT F, UNION CITY
SCHLEIEER III, GROVER E, UNION CITY
SHORE, JAMES WM, MARTIN
SMITH JR, O KAY, MARTIN
SMITH, DAVIO ANDREW, MARTIN
SMITH, JAMES HERMAN, OYERSBURG
SOMASHEKAR, K R, MARTIN
STEWART JR, CHAS V, OYERSBURG
TAYLOR, RICHARD DAVIO, OYERSBURG
THOMPSON, THOS REECE, OYERSBURG
THORNTON JR, W I, OYERSBURG
THURMOND, ENOS C, MARTIN
TUCKER, WM HENRY, RIPLEY
VECIANA, JOSE A, MARTIN
WARNER, LYNN ANDREW, OYERSBURG
WEBB, CLAUDE RAYMOND, RIPLEY
WELLES JR, EDWARD H, ORESOEN
WOLEE, JOSEPH W, OYERSBURG
YOUNG JR, ROBT ROGER, UNION CITY

OVERTON COUNTY MEDICAL SOCIETY

CLARK, MALCOLM E, LIVINGSTON
FORSBERG, EDWIN R, LIVINGSTON
LOOPER, ERED B, LIVINGSTON
NORRIS, DENTON O, LIVINGSTON
QUARLES JR, WILL G, LIVINGSTON
ROE, JACK MICHAEL, LIVINGSTON
SHIPLEY, JERRY LYNN, LIVINGSTON
WALLACE, JEEFEERY L, LIVINGSTON

PUTNAM COUNTY MEDICAL SOCIETY

ANDERSON, ROY R, COOKEVILLE
BARNARD JR, VAUGHN N, COOKEVILLE
BARNES, SAM TAYLOR, COOKEVILLE
CHAPIN, EREDERICK J, COOKEVILLE
* CLARK, JACK L, COOKEVILLE
DE BERRY, JAMES T, COOKEVILLE
DERRYBERRY, WALTER E, COOKEVILLE
DOUGLAS, DALE E, COOKEVILLE
FRANCIS, WM CLARK, COOKEVILLE
GARINGAN, EVANGELITO C, COOKEVILLE
GORYL, STEPHEN V, COOKEVILLE
GRAY, JAMES C, COOKEVILLE
HASSLER, LLOYD R, COOKEVILLE
HUANG, LAYKON TAN, KNOXVILLE
HUMPHREY, WM MERRITT, COOKEVILLE
JACKSON JR, JOHN M, COOKEVILLE
JONES JR, CLARENCE LEE, COOKEVILLE
JORDAN III, CHAS EDWARD, COOKEVILLE
LAWRENCE, THOMAS L, COOKEVILLE
LIMBACHER, JOHN P, COOKEVILLE
LOWE, JERE W, COOKEVILLE
LYNN NO, KENNY W, COOKEVILLE
MOORE JR, JOHN T, ALGOOD
PANZER, JAMES DAVIO, COOKEVILLE
PRYOR, ROYCE BOWEN, COOKEVILLE
RUANTO, ARTHUR N, CELINA
SHAW, JAMES WILLIAM, COOKEVILLE
* SHIPLEY, THURMAN, COOKEVILLE
STUBER, HARRY L, COOKEVILLE
TALMAGE, JAMES B, COOKEVILLE
TANSL, DONALD WAYNE, COOKEVILLE
TAYLOR, WM SNOOGRASS, COOKEVILLE
TIONGSON, NORA BOLANOS, CELINA
TIONGSON, RODRIGO VERZOSA, CELINA
VERASTEGUI, EMILIO, COOKEVILLE
VOSSELL JR, LOUIS E, COOKEVILLE
WAHL, JOSEPH W, COOKEVILLE
WEST, ROBERT R, COOKEVILLE
WILLIAMS, CLAUDE M, COOKEVILLE
WOLEE, KATHERINE G, MONTEREY
WOMACK III, CHARLES T, COOKEVILLE
ZIMMERMAN JR, GUY, COOKEVILLE

ROANE-ANDERSON COUNTY MEDICAL SOCIETY

AHLER, ALBERT JULIAN, HARRIMAN
BARRY, EREDERICK JAMES, OAK RIDGE
BEARD, ALICE C ANDERSON, KINGSTON
BEOWELL, WILLIAM HOWARD, OAK RIDGE
BENNETT, WILLIAM E, HARRIMAN
BERNSTORE, ROBERT C, WARTBURG
BIGELOW, ROBT RAMSEY, OAK RIDGE
BINGHAM, TERRY M, HARRIMAN
* BISHOP, ARCHER W, CLINTON
BLOCK JR, CLEMENT H, OAK RIDGE
BRANTLEY, RICHARD GREEN, OAK RIDGE
BROWN JR, GERON, OAK RIDGE
BRUTON, CHARLES, OAK RIDGE
BUNICK, ELAINE MARIE, OAK RIDGE
CALDWELL, MARVIN GENE, OAK RIDGE
CAMP, ROBERT BRADFORD, OAK RIDGE
CAMPBELL, CHAS LYNN, OAK RIDGE

CARABIA, ALEX GARCIA, OAK RIDGE
CASTER, C NICHOLAS, COALEIELD
CHAPMAN, JAMES E, OAK RIDGE
COREA, CHAS JOS, HARRIMAN
CREWS, JOHN PEARCE, OAK RIDGE
CUNNINGHAM, ELBERT C, HARRIMAN
DABBS, C HARWELL, ROCKWOOD
DARLING JR, CHAS ELLETT, OAK RIDGE
DE PERSIO, JOHN O, OAK RIDGE
* DE PERSIO, ROBT E, OAK RIDGE
DE VEGA, ARMANDO EERNANOD, OAK RIDGE
DEW, RICHARD ALLAN, OAK RIDGE
* DINGS, PARLEY MARTIN, CLINTON
DOTSON, ROBERT SCOTT, OAK RIDGE
DRY, LAURENCE REVELLE, OAK RIDGE
* DUNLAP, ROBT WEYER, OAK RIDGE
EVERSOLE JR, EARL, OAK RIDGE
FOOTE, CLARY P, HARRIMAN
FORTNEY, T GUY, INDIANAPOLIS, IN
FULLER, THOS ASBURY, ROCKWOOD
GARTON, ANTHONY W, OAK RIDGE
GENELLA JR, ERANK H, OAK RIDGE
GENTRY, ROBERT E, OAK RIDGE
GILLESPIE, JAMES TRIGG, OAK RIDGE
GOSWITZ, ERANCIS ANDREW, OAK RIDGE
GOSWITZ, HELEN A VOOOPICK, OAK RIDGE
GUWDER, TIMOTHY DENNIS, OAK RIDGE
GRAUSE, THOS J, OAK RIDGE
GURNEY, CHAS BRYSON, OAK RIDGE
HARDY, WM P, OAK RIDGE
HARTMAN, DONALD LEE, OAK RIDGE
HEALO, DAVIO GRANT, OAK RIDGE
HEODEN JR, HENRY, CLINTON
HELLMANN JR, ROBERT S, HARRIMAN
HENORIX, ERNEST LEE, OAK RIDGE
HILTON, JAMES ISAIAM, OAK RIDGE
HOLBERT, THOMAS R, OAK RIDGE
HOSTETTER, HERBERT J, OAK RIDGE
HOWARD, ROBT G, OAK RIDGE
HUBNER, KARL FRANZ, OAK RIDGE
JENKINS, THOS ARTHUR, OAK RIDGE
JERNIGAN, JOHN EORREST, OAK RIDGE
JOHNSON, RAYMOND A, OAK RIDGE
JONES, H STRATTON, HARRIMAN
KAERNICK, ERNEST ELLIOTT, OAK RIDGE
KERLEY, HAROLD EUGENE, OAK RIDGE
* KILLEEFER, LOUIS A, HARRIMAN
KING, AVERY PARSONS, OAK RIDGE
KRISHNAN, LALITA, OAK RIDGE
LEW, IRA EUGENE, OAK RIDGE
LOY, WM ALLEN, OAK RIDGE
LUCKMANN, KENNETH E, OAK RIDGE
LUSHBAUGH, CLARENCE C, OAK RIDGE
LYNNES, HOWARD M, ROCKWOOD
LYON, JOS STONE, OAK RIDGE
MASSEY, SAML OLIVER, OAK RIDGE
MC LAUGHLIN, VICTOR WAYNE, OAK RIDGE
MC NEELEY, SAML GENE, NORRIS
MCMAHON, CLETUS JOSEPH, OAK RIDGE
METCALE, THOMAS H, OAK RIDGE
MILLER JR, KENNETH T, OAK RIDGE
MOORE, RICHARD J, EAYETTEVILLE, NC
* NORTICK, ADAM ROSS, WARTBURG
PALATINUS, JOS, NASHVILLE
PALMER, ETNA LITTLE, OAK RIDGE
PRESTON, LEWIS EREDERICK, OAK RIDGE
PUGH JR, WM W, OAK RIDGE
RAGAN, CHAS JULIAN, OAK RIDGE
REIO, FRANCIS R, OAK RIDGE
RICKS, PHILLIP M, OAK RIDGE
ROMBERGER, JAMES A, HARRIMAN
ROMBERGER, MILDRED K, HARRIMAN
ROUSE, JAMES M, OAK RIDGE
* RULEY, HENRY B, OAK RIDGE
RUSHTON JR, ERANCIS E, WARTBURG
SCHOLO, ALAN CRAIG, OAK RIDGE
SEAY, DAVID WORRELL, OAK RIDGE
* SENSENRACH, CHAS WILLIS, OAK RIDGE
SHEELY, LOWRY LINDSEY, OAK RIDGE
SIGMAR, LISELOTTE E, OAK RIDGE
SINICROPE, RONALO A, OAK RIDGE
SISK, JOHN R, HARRIMAN
SMALLEY, LEE ALAN, OAK RIDGE
SNOOGRASS, JOHN VASS, ROCKWOOD
SPRAY, PAUL ELLSWORTH, OAK RIDGE
STANLEY, DAVID GRANVILLE, OAK RIDGE
STEVENS III, GEO MILLER, OAK RIDGE
* SULLIVAN JR, CHAS RENNE, OAK RIDGE
TEOGER, MIRIAM R, HARRIMAN
THOMAS, DANL MARTIN, CLINTON
TITTLE, JOE EVAN, OAK RIDGE
UPCHURCH, DAVIO THOS, OAK RIDGE
VAN HOOK, STONEWALL J, OLIVER SPRINGS
WALTERS, WM GARY, OAK RIDGE
WELCH JR, JOHN WM, OAK RIDGE
WILLETT, DWIGHT H, HARRIMAN
WILSON, ROBT EARL, KINGSTON
ZANOLLI, GINO, OAK RIDGE

ROBERTSON COUNTY MEDICAL SOCIETY

BASSEL, JOHN BURR, SPRINGFIELD
BAZALOUA, GILBERT, CROSS PLAINS
BOOTHITT, PAUL M, SPRINGFIELD
DRESSLER, NEIL, SPRINGFIELD
ELDER, ROBT H, CEDAR HILL
HAYES, WARREN G, SPRINGFIELD
JACKSON, JOHN MC REYNOLDS, SPRINGFIELD
KUMAR, SARBJEET SINGH, SPRINGFIELD
LOONEY, CARROLL MIDDLEY, SPRINGFIELD
MILAN, EDITA, SPRINGFIELD
O DONNELL III, JOHN WM, SPRINGFIELD

PROCTOR, GEO THOS, SPRINGFIELD
JUAKLES, JAMES RICHARD, SPRINGFIELD
SATPATHY, PANCHANAN, SPRINGFIELD
SELE, NICHOLAS BARRETT, SPRINGFIELD
SHEARER, ROBERT A, SPRINGFIELD
* STONE, WM PIPKIN, SPRINGFIELD
TURNER, JOHN RUNYAN, SPRINGFIELD
WEBSTER, RAYMOND HARRIS, SPRINGFIELD
* WILKISON, JOHN EDWIN, SPRINGFIELD

RUTHERFORD COUNTY/STONES RIVER ACADEMY OF MEDICINE

ABERNATHY, JAMES PAUL, MURFREESBORO
ADAMS, CARL E, MURFREESBORO
AKIN, HAROLD THOS, MURFREESBORO
ALEXANDER, JOHN HUTCHINS, MURFREESBORO
ALLEN, JAMES THOS, MURFREESBORO
ANDREWS, SUSAN T, MURFREESBORO
BAILEY, JOS C, MURFREESBORO
* BARHAM, WM STANLEY, MURFREESBORO
BELL, RICHARD BRYAN, MURFREESBORO
BERNER, JAMES L, MURFREESBORO
BOX, JAMES T, MURFREESBORO
BRYANT, RODNEY CRAIG, WOODBURY
BRYANT, WM ARTHUR, WOODBURY
BUTLER JR, HENRY K, MURFREESBORO
CAMPBELL, JERRY NEAL, MURFREESBORO
CARTER III, SAM FRANK, MURFREESBORO
COHEN, HENRY A, MURFREESBORO
CUNNINGHAM, JOHN THOS, MURFREESBORO
* DAVISON, BERNARD S, MURFREESBORO
DIXON, JOHN HERMAN, MURFREESBORO
DODD, DAVIO T, MURFREESBORO
DYER, H LORNE, FRANKLIN
ESTES, PAUL CASEY, MURFREESBORO
GARNER JR, JAMES W, MURFREESBORO
GARRISON JR, SINNEY C, MURFREESBORO
GARRISON, RUFUS J, MURFREESBORO
GOODMAN JR, CHAS EDWARD, MURFREESBORO
GREEN, RICHARD E, MURFREESBORO
HACKMAN, ROBT HENRY, MURFREESBORO
HAY, SAML HUTSON, MURFREESBORO
HEEINGTON JR, CHAS A, EPO SEATTLE, WA
HESTER, GEORGE STEPHEN, MURFREESBORO
* HOLLOWELL, ROBT DEWEY, VENICE, FL
HUDSON, DAVIO LEE, MURFREESBORO
HUNT, KENNETH DALE, MURFREESBORO
HUTCHISON, NORTON H, SHELBYVILLE
JOHNS, OSCAR THOMAS, MURFREESBORO
KAUEMAN, JAMES KENNETH, MURFREESBORO
KENDALL, DOUGLAS WARREN, MURFREESBORO
KENDALL, ROBT LEON, MURFREESBORO
KNIGHT, JOS C, MURFREESBORO
KNIGHT, ROBT TAVEL, MURFREESBORO
LEWIS, CHAS WINGO, MURFREESBORO
LOVELACE, FRED ROYCE, MURFREESBORO
LOWERY JR, EDWIN RAY, MURFREESBORO
* MOORE, RALPH B, CANDLER, NC
MURREE, MATT B, MURFREESBORO
MYERS, FREDERICK J, WOODBURY
* MYERS, RUSSELL E, WOODBURY
NUNNERY, JAMES A, MURFREESBORO
ODOM, EUGENE PORTER, MURFREESBORO
ODOM, STEPHEN GUY, MURFREESBORO
RANSOM, ROBT GEO, MURFREESBORO
REUHLAND, LEON LOYON, WOODBURY
RICKARD, RANDALL C, MURFREESBORO
SANDERS, ROBT SMITH, MURFREESBORO
SARASWAT, SUDHA, SMYRNA
SHACKLETT, WM WHITE, MURFREESBORO
SHELTON, BEN A, SMYRNA
SMITH, GEO WILBURT, MURFREESBORO
SMITH, WM RADFORD, MURFREESBORO
STARRETT, JAMES ALAN, MURFREESBORO
TENPENNY, JAMES W, MURFREESBORO
TOLBERT, E C, MURFREESBORO
TUMA, ROBERT PAUL, MURFREESBORO
TURNER, THOS A, MURFREESBORO
TURPIN JR, B P, MURFREESBORO
WAPNER, BARTON WAYNE, MURFREESBORO
WILLIAMS, OLIN OLIS, MURFREESBORO
WITT, TERRY JAMES, MURFREESBORO
WOLE, HERBERT RICHARD, WOODBURY
YOUNG JR, JESSE HOWARD, MURFREESBORO

SCOTT COUNTY MEDICAL SOCIETY

COFFEY, DAVIO B, ONEIDA
HALL, THOMAS K, ONEIDA
HUEE, MAXWELL E, ONEIDA
KLINE, GEO LITTON, ONEIDA
LEEDS, HORACE MOTT, ONEIDA
PERKINS, MICHAEL, ONEIDA

SEVIER COUNTY MEDICAL SOCIETY

ROZEMAN II, CHARLES H, SEVIERVILLE
* BRADY, ROBT A, SEVIERVILLE
CHAEIN, DAVIO C, SEVIERVILLE
COUSINS, JAMES A, SEVIERVILLE
JACOBS JR, JOHN C, SEVIERVILLE
KIDD JR, CHARLES E, SEVIERVILLE
MCGAHA, SAMUEL W, SEVIERVILLE
ROACH, CHARLES L, SEVIERVILLE
SONNER, JOHN L, SEVIERVILLE
TOLLEY, VINCENT BLANE, SEVIERVILLE
VAN ARSOALL, JAMES P, SEVIERVILLE
WALOROP, CHARLES E, PIGEON FORGE

SMITH COUNTY MEDICAL SOCIETY

HRATTON, EDGAR K, HARTSVILLE
GREEN, HUGH E, CARTHAGE
PETTY, DAVIO G, CARTHAGE

SULLIVAN-JOHNSON COUNTY MEDICAL SOCIETY

ADAMS, WESLEY F., BRISTOL
ADELSON, GARY L., KINGSFORT
ALISON, HAROLD W., KINGSFORT
ALLFY, EOMONO LYNN, KINGSFORT
AIEN, EDWARD M., BRISTOL, VA
BACHMAN JR, HARRY WILSON, BRISTOL
* BACHMAN, HARRY WILSON, BRISTOL
BAKER, RICHARD ODOLLEY, KINGSFORT
BALES, DONALD W., KINGSFORT
BANDEIAN, JOHN J., BRISTOL
BARNES, N ALAN, KINGSFORT
BECHTEL JR, JACK T., BRISTOL
BELL, WILLIAM M., KINGSFORT
BICE, CHAS ROBT, KINGSFORT
BLANTON JR, FRANK S., BRISTOL
BOCKIAN, HERBERT HAROLD, BRISTOL
* BOLES, JAMES H., KINGSFORT
BOLING, FREDERICK F., KINGSFORT
BOOKOUT, J MICHAEL, KINGSFORT
BOOZE, GEO WM, KINGSFORT
BOWMAN, JAMES H., BRISTOL
BOYO, ARTHUR MORGAN, KINGSFORT
BOYLE, GARY, BRISTOL
BRINKLEY, BILLY BOOTH, BRISTOL
BROCK JR, HOWARD THOS, KINGSFORT
BROGLIO, ANTHONY LEE, BRISTOL
BROOKSHIRE JR, PAUL F., KINGSFORT
BROWN, HENRY JAMES, KINGSFORT
* BROWN, ROBT H, HENDERSONVILLE, NC
BUONINGTON, RICHARD S., BRISTOL
BURMEISTER, DOUGLAS GLEN, KINGSFORT
BUTTERWORTH JR, JACKSON, BRISTOL
BYERS JR, JOHN G., BRISTOL
BYRO, KEITH HAROLD, KINGSFORT
CALCOTE, CLAUDE MC GHEE, BRISTOL
CALOWELL, RONALD DAVID, BRISTOL
CAMERON, DONALD A., KINGSFORT
CARR, HENRY AUSTIN, BRISTOL
CARTER, EDWARD KENT, KINGSFORT
CARTER, LOCKE YANCEY, KINGSFORT
CATE, JOHN COLUMBUS, KINGSFORT
CATLIN, ROGER W., BRISTOL
CHAMBERLIN, MARIAN L., KINGSFORT
CHANCE, DONALD PAUL, KINGSFORT
CHAPMAN, CHAS EMMITT, BRISTOL
CHARTIER, GILBERT JOHN, KINGSFORT
CHEW, NATHANIEL JOHN, BRISTOL
CHIPMAN, DENNIS CLARENCE, KINGSFORT
CHRISTENSEN, ROBT CHAS, KINGSFORT
CLARK, WARNER L, CHURCH HILL
COOPER, JOE BYRON, KINGSFORT
COWAN, BENNETT YOUNG, BRISTOL
COWDEN, DAVID ANTHONY, KINGSFORT
COX, DAVID LEMUEL, KINGSFORT
COX, LARRY H, KINGSFORT
CRAWFORD, ALVIN S., BRISTOL
* CREOLE, WM SWINDELL, HILTON HEAD, SC
CROCKETT JR, CLAUDE H., BRISTOL
CROWDER, JACK ROBERTS, KINGSFORT
DALLAS, JOHN L., KINGSFORT
DAVE, NIRANJAN JAYANTILAL, WEBER CITY, VA
DAVIS, FLOYD, BLOWING ROCK, NC
DICKERSON, DANL LAWRENCE, KINGSFORT
DIECKMANN, MERWIN R, KINGSFORT
DONALDSON, ROBERT C, KINGSFORT
DOOTY, ROBT O, KINGSFORT
DYER JR, WM MILLS, KINGSFORT
EARLY, JAMES LAWRENCE, BRISTOL
* ERWIN, J W, BRISTOL
ESTES, TERRELL C, BRISTOL
* EVERSOLE, WM CLEGG, KINGSFORT
* EXUM, WM ALLEN, KINGSFORT
FANKHOUSER, RUSSELL L, BRISTOL
FERGUSON, JERE W, BRISTOL
FINCHER JR, JOHN A, BRISTOL
FLANARY, FRANK SEVIER, KINGSFORT
FLEMING, JOE F, KINGSFORT
FLORA, DON ATLEE, KINGSFORT
FOSTER, LARRY J, KINGSFORT
GANTT, PICKENS A, BRISTOL
GARFIELD, CLAUDE R, KINGSFORT
GARRIOTT, DAVID KENT, KINGSFORT
GAYLOR, WALTER R, BRISTOL
GEER, ROBT MAC, KINGSFORT
GENORON, R M, KINGSFORT
GIBSON, JOHN THOS, BRISTOL
GINTHER, JEFFREY P, BRISTOL
GLASGOW, ROBT MORRIS, BRISTOL
GLASS, WILLARD G, KINGSFORT
* GLENN, ROBT ORRUS, MOUNTAIN CITY
GOLOEN, BILLY N, KINGSFORT
GONCE, JOEL O, SURGOINSVILLE
GONOO, JUAN, KINGSFORT
GORRELL, ALLEN L, BRISTOL
GREEAR JR, FRED BONHAM, BRISTOL
GREEN JR, WAVERLY S, BRISTOL
GREENE, ELMER ALBERT, KINGSFORT
GRIFFIN, WILLIAM C, KINGSFORT
GRIGSBY JR, WM C, BRISTOL
GRIGSBY, WM PAUL, KINGSFORT
HAAS, EVERETT LEO, BRISTOL
HAOAO, MICHEL NASRI, KINGSFORT
HARRISON JR, WM, KINGSFORT
HARTER, BASIL T, BRISTOL
HARTSELL, MICHAEL H, KINGSFORT
HERNANDEZ, GUSTAVO E, KINGSFORT
HOGAN JR, MARSHALL DAVIS, KINGSFORT

HOLT, DAVID A, SPARTANBURG, SC
HUOSON, WILLIAM DUOLFY, KINGSFORT
HUNTER, RONALD W, KINGSFORT
JACKSON JR, HENRY GUY, KINGSFORT
JAMISON, KING ARCY, BRISTOL
JARVIS, RUY JOE, KINGSFORT
JAYNE JR, J LAWRENCE, BRISTOL
JERNIGAN, ROBT H, KINGSFORT
JONES, MALCOLM MC KINFY, KINGSFORT
JONES, ROBT CLARK, KINGSFORT
JONES, SAMUEL RIDDLE, KINGSFORT
KEITH, ROBT EARL, KINGSFORT
KELLY, RONALD CLARK, BRISTOL
KEPPLER, C BURTON, KINGSFORT
KIOWELL JR, F R, KINGSFORT
KIFSOU, KENNETH RUODOLPH, KINGSFORT
KING, JOS AUSTIN, KINGSFORT
* KNAPP, JOHN ALLEN, KINGSFORT
KNICKERBOCKER, FRED RAY, BRISTOL
KRISHNAMOURTHY, S, KINGSFORT
KURRE JR, JOS H, BRISTOL
LAMB, WILLIAM A, KINGSFORT
LANE, DAVID L, NICKELSVILLE, VA
LAPIS, JAMES L, BRISTOL
LINK, NELSON EDWARD, BRISTOL
LOWRY, KERMIT, BRISTOL
LYMBFRIS, MARVIN, KINGSFORT
LYNCH, KENNETH CLYDE, KINGSFORT
MAOOX, ROBT EMORY, KINGSFORT
MAKRES, THOMAS O, BRISTOL
MALOY, JOS KENNETH, KINGSFORT
MC CONNELL, FREDERICK GRAY, KINGSFORT
MC COY, JAMES L, KINGSFORT
MC DONOUGH, JOHN R, KINGSFORT
MC FADDIN, JAMES GORDON, BRISTOL
MC GUIRK, JAMES ELORIOGE, KINGSFORT
MCGAEE, C LEON, BRISTOL, VA
MCILWAIN, WILLIAM A, BRISTOL
MICHAELS, HERBERT JAMES, KINGSFORT
MILLER, DAVID, KINGSFORT
MILLER, GARY P, KINGSFORT
MILLER, JERRY LEE, KINGSFORT
MILLER, LEE HUTTER, KINGSFORT
MITCHELL, JOE ELIAS, BRISTOL
MOHLER JR, EBERT M, KINGSFORT
MONGLE, BRUCE WM, BRISTOL
MOONEY, NEIL FRANCIS, BRISTOL
MOORE III, JOHN H, KINGSFORT
MORIN, J RAOUL, KINGSFORT
MORRIS, LAWRENCE RAY, KINGSFORT
MORRISON, PHILIP HAPWORTH, BRISTOL
MORTELL, ANN C, KINGSFORT
MORTON, RALPH F, KINGSFORT
MOSRIE, AZETT JIMMIE, KINGSFORT
MOUKHEIBIR, NABIL W, KINGSFORT
MURRAY JR, MARION JULIAN, BRISTOL
NAGALLA, LAKSHMAN R, BRISTOL
NICHOLS JR, JAMES B, KINGSFORT
NICLEY, FLOYD EDWARD, BRISTOL
NORTHROP, ROBERT EDWARDS, KINGSFORT
NOWLIN, WADE HAMPTON, BRISTOL
OLNEY, LA VERNE E, KINGSFORT
OWEN, C RICHARD, KINGSFORT
PATTON, CHARLEY MACK, KINGSFORT
PATTON, ROBT CARROLL, KINGSFORT
PEARSON, RANDALL EUGENE, KINGSFORT
PEAVYHOUSE, JOEL Q, KINGSFORT
PERDUE SR, JOHN MARVIN, KINGSFORT
PETTIGREW, JAMES ANDREW, BRISTOL
POWERS JR, JOHN S, KINGSFORT
PROPPER, NORMAN S, KINGSFORT
REDOICK, LOVETT P, KINGSFORT
REED, RICHARD K, KINGSFORT
RENFRO, CLAY ARLEN, KINGSFORT
REPASS, ROBT A, BRISTOL
REYNOLDS JR, LESLIE B, KINGSFORT
RIDGEWAY, NATHAN ALVAH, KINGSFORT
ROBBINS, JEFFREY PHILIP, BRISTOL
ROBERSON, TRAVIS HUBERT, CHURCH HILL
ROBERTSON, KENNETH J, KINGSFORT
ROBINSON, ANTHONY H, KINGSFORT
ROGERS, MALCOLM E, KINGSFORT
ROLEN, ALVIN CURRY, BRISTOL
RUSSER, ROBERT A, KINGSFORT
RUCKER, THOS NELSON, KINGSFORT
SALCEDO, JULIO A, KINGSFORT
SAMBAT, RICARDO O, KINGSFORT
SCHILLING, DAVID F, CHURCH HILL
SCHMIOT, WM F, BRISTOL
* SCRIBNER, WALTER E, KINGSFORT
SEWELL, DAVID H, KINGSFORT
SIDES JR, PAUL J, KINGSFORT
SIKORA, FRANK STEVEN, BRISTOL
SIMS, HAROLD ALLEN, BRISTOL
SKINNER, WENDELL L, KINGSFORT
SLAUGHTER, FREDERICK D, BRISTOL
SLOCUM, CARL WM, KINGSFORT
SMIGOY, JOS FRANKLIN, KINGSFORT
SMITH, LYLE R, KINGSFORT
SMITH, RONALD STEVEN, KINGSFORT
SMITH, WARREN YOUNG, KINGSFORT
SOBEL, ABRAHAM ISAAC, KINGSFORT
SOLOMON, DALE E, KINGSFORT
SPRINGER, DOUGLAS JOHN, KINGSFORT
STRAIDER, LORENZO O, BRISTOL
STRANG JR, ROBERT T, KINGSFORT
STRANG, ROBT TUODR, KINGSFORT
STUBBS, HAL SESSION, BRISTOL
SULKOWSKI, VIKTOR P, KINGSFORT
SULLIVAN, HUGH MILTON, KINGSFORT

TALTON JR, BROOKS M, KINGSFORT
* TJOOD, THOS C, BRISTOL
TOOTHMAN, CLARA J, BRISTOL, VA
TULLIOGF, ARCHER K, KINGSFORT
TURNER, HARRISON D, KINGSFORT
TURPIN JR, ERNEST A, BRISTOL
VANCE JR, FREDERICK V, BRISTOL
* VANCE, DOUGLAS DOROT, BRISTOL
VANN, ROBT LEE, BRISTOL
VERMILLION, JAMES S, KINGSFORT
WADEWITZ, PETER, KINGSFORT
WALLEY, WM CARL, KINGSFORT
WESTERFIELD, LARRY H, KINGSFORT
WESTMORELAND, DENNIS G, KINGSFORT
WHISNANT, WM HOWARD, BRISTOL
WHITAKER JR, SIDNEY S, BRISTOL
WHITT, HIKAM JACKSON, KINGSFORT
WIKI, SIDNEY ALFRED, BRISTOL
* WILLIAMS, HOMER P, BRISTOL
WILLIAMS, JOAN THOMPSON, BRISTOL
WILLIAMS, JULIAN E, KINGSFORT
WILLIAMS, ROBT HERMAN, KINGSFORT
WILSON, EARL K, BRISTOL
WILSON, JOHN AARON, KINGSFORT
WINSOR, MICHAEL JON, KINGSFORT
WOLFE, JAMES W, KINGSFORT
ZAIOTI, SARFRAZ ALI, BRISTOL

SUMNER COUNTY MEDICAL SOCIETY

BHAGAVAN, NUGGAHALLEY K, GALLATIN
BLACKSHEAR, J R, GALLATIN
BROWN, LLOYD TYNTE, GALLATIN
CAGLE, OLEORE, GALLATIN
CAREY JR, JACK WILLARD, HARTSVILLE
CARMACK JR, JAMES H, HENDERSONVILLE
CARTER, THOS FOSTER, WESTMORELAND
CASE JR, KENNETH RYON, GALLATIN
COX, JOE DAVID, GALLATIN
DITTES, ALBERT G, PORTLAND
FLYNN, JOHN, GALLATIN
HILL, TEO A, GALLATIN
HOOPER, HALDEN WAYNE, GALLATIN
KELLEY, IRA N, HARTSVILLE
KING, A SIDNEY, GALLATIN
LAOD, JAMES TRUBLE, PORTLAND
LAKSHMIKANTH, B N, GALLATIN
LANZ, ELWIN, HENDERSONVILLE
LILLY, JAMES AARON, GALLATIN
MASSEY, WM ROE, GALLATIN
MCALAEAY, JOHN C, HENDERSONVILLE
MCNULTY, JOHN P, PORTLAND
MOORE, JAMES N, WHITE HOUSE
PARASWANATH, B S, GALLATIN
PONCE, LU, PORTLAND
ROBERTS, DAVID E, GALLATIN
RUCKLE, R H, PORTLAND
SANDERS, CLARENCE RAMEY, GALLATIN
SIMONTON JR, RALPH W, PORTLAND
SMITH, G KYLE, GALLATIN
STEPHENSON, WALTER H, GALLATIN
STEWART, WM DAVID, GALLATIN
THOMPSON, JOHN K, GALLATIN
TOOD, M ALFRED, GALLATIN
TROUTT JR, JAMES R, GALLATIN
WALLACE, JOHN B, GALLATIN
WEBSTER, ROBT CLAYTON, GALLATIN

TIPTON COUNTY MEDICAL SOCIETY

ALEXANDER, WARREN ALISON, COVINGTON
BOLTON, TRAVIS LEON, COVINGTON
CANNON JR, JESSE J, COVINGTON
HO, JIUNN H, COVINGTON
HYATT, NORMAN LYLE, COVINGTON
MATTHEWS, JOSEPH HARKET, COVINGTON
MC CULLOUGH, BILLIE S, COVINGTON
RUFFIN JR, JAMES S, COVINGTON
VAUGHN, HUGH WYNN, MUNFORD
VIPRAKASIT, DEJO, COVINGTON
VIPRAKASIT, SUTTIWARA, COVINGTON
WITHERINGTON JR, A S, MUNFORD
WITHERINGTON, JAMES O, COVINGTON

WARREN COUNTY MEDICAL SOCIETY

ACKROYO, ALAN W, ROCK ISLAND
BIGBE, WALLACE BURNS, MC MINNVILLE
BRATTON, DAVID M, MC MINNVILLE
BURCK JR, HARRY E, MC MINNVILLE
CATEN, JOSEPH, MC MINNVILLE
DAVIS, W GLENN, MC MINNVILLE
* DIETRICH, JULIUS PETER, MC MINNVILLE
FISHER, JOS F, MC MINNVILLE
GAW, J C, MC MINNVILLE
HARRIS, HOYT C, MC MINNVILLE
HILL, THOS LEWIS, MC MINNVILLE
JACOBS, G JACKSON, MC MINNVILLE
JENKINS, JIMMY E, MC MINNVILLE
KNOCHS, OLOIS A, MC MINNVILLE
KNOWLES JR, WILLIAM W, SMITHVILLE
MOORE, JAMES L, MC MINNVILLE
MUKHERJI, BARUNOITYA, MC MINNVILLE
PEOTIG, THURMAN LEE, MC MINNVILLE
PHILLIPS, JAMES EUGENE, MC MINNVILLE
RAGSOALE, TOMMY MAC, MC MINNVILLE
REEVES, ROBERT O, MC MINNVILLE
RHINEHART, MARGRET WRENN, SPENCER
* SMOOT, BETHEL CAMPBELL, MC MINNVILLE
TAYLOR JR, C FRED, MC MINNVILLE
TROOP JR, JOE RAYMOND, MC MINNVILLE

WASHINGTON-CARTER-UNICOI COUNTY MEDICAL ASSOCIATION

AMMAD, IRSHAD, JOHNSON CITY
ALLEN, CHAS EDWARD, JOHNSON CITY
ALLEN, ROBERT C, JOHNSON CITY
ARCHIE, DAVID S, ELIZABETHTON
ARKEE, MOHAMMAD S K, JOHNSON CITY
HAILEY JR, WILLIAM P, JOHNSON CITY
BAINES, EARL, ERWIN
BATTLE JR, JAMES WAYNE, JOHNSON CITY
BATTLE, GAY KIRCHNER, JOHNSON CITY
BEAVER, WALTER RICHARD, JOHNSON CITY
BEJAR, JOSE M, KANSAS CITY, KA
BERRY, ROYCE M, JOHNSON CITY
BOELEN, LOUIS J, JOHNSON CITY
BORTHWICK, THOMAS R, JOHNSON CITY
* BOWMAN, JOSEPH R, SINGER ISLAND, FL
BRIEGFORTH JR, WM ADAMS, JOHNSON CITY
BRONSON, S MARTIN, ELIZABETHTON
BROWN JR, PAUL EDWARD, JOHNSON CITY
* BROWN, GEO HENDERSON, JOHNSON CITY
BRYANT, LESTER RICHARD, JOHNSON CITY
BUCHER, RICHARD, ELIZABETHTON
BUDD, DUANE COLEMAN, JOHNSON CITY
* BUDD, GARNET J, JOHNSON CITY
BURIK, NICHOLAS P, ELIZABETHTON
BURNETTE, HAROLD WINSTON, JOHNSON CITY
CAMPBELL, E MALCOLM, JOHNSON CITY
CANCELLARO, LOUIS A, JOHNSON CITY
CARAVELLO, PETER M, JOHNSON CITY
CARTER, RICHARD SAML, PITTSBURGH, PA
CHAMBERS, GARY R, ELIZABETHTON
CLARK, ROBT L, JOHNSON CITY
COLE, CHAS PITTMAN, JOHNSON CITY
COLINGER JR, JUDG WALTON, ERWIN
CONE, WILLIAM JOSEPH, JOHNSON CITY
COOGAN, PHILIP S, JOHNSON CITY
COSBY JR, LEWIS F, JOHNSON CITY
COSTNER, ALFRED NIXON, JOHNSON CITY
COTO, HUMBERTO, JOHNSON CITY
CREECH, CLARENCE MORLEY, JOHNSON CITY
CROCKETT, DOUGLAS HARMAN, JOHNSON CITY
CRUZ JR, TEODORICO P, ELIZABETHTON
CUPP JR, HORACE BALLARD, JOHNSON CITY
DAVIS, DUDLEY H, JOHNSON CITY
DE WITT, JAN ALLEN, JOHNSON CITY
DENNIS, ROBT G, JOHNSON CITY
DHALLIWAL, AVTAR SINGH, JOHNSON CITY
DUMLER, MICHAEL, JOHNSON CITY
DOANE, DAVID G, JOHNSON CITY
DOSSETT JR, BURGIE E, JOHNSON CITY
DOUGLAS, HERSCHEL L, JOHNSON CITY
DUNKELBERGER, BRIAN H, JOHNSON CITY
EODENS, FRED R, JOHNSON CITY
EDWARDS, THOMAS A, JOHNSON CITY
ELLIOTT, RICHARD LEVERE, JOHNSON CITY
* ELLIS, MACKINNON, GRAY
FISH, CHAS ABRAHAM, JOHNSON CITY
* FLEISCHMANN, WALTER, JOHNSON CITY
FREEMAN, DAVID NOBLE, JOHNSON CITY
FRIZZELL, BYRON W, JOHNSON CITY
FULLER III, IRA BUTLER, JOHNSON CITY
FULTON, LYMAN AVARD, MOUNTAIN HOME
GALLEMORE, GAIL H, JOHNSON CITY
GALLOWAY, RICHARD EUGENE, ELIZABETHTON
* GAMBILL, IRA M, JOHNSON CITY
GARLAND, NEWTON FARR, JOHNSON CITY
GASTINEAU, JERRY LEE, ELIZABETHTON
GIBSON JR, JAMES A, JOHNSON CITY
GILLESPIE, CHRIS L, JOHNSON CITY
GODFREY, JAMES HODGE, JOHNSON CITY
GOFFIN, FLOYD B, JOHNSON CITY
GOROON JR, LAWRENCE E, JOHNSON CITY
GOULDING JR, CLARENCE E, JOHNSON CITY
GRAHAM, LARRY GILL, JOHNSON CITY
* GRESHAM, CHAS SUMNER, JOHNSON CITY
GRICE, ANN, JOHNSON CITY
GURLER, RURT JAY, JOHNSON CITY
* HALE, JAMES O, JOHNSON CITY
HALL, BEN DAVID, JOHNSON CITY
* HANKINS, WALTER DOUGLAS, JOHNSON CITY
HARRIS, ARTHUR SALE, JOHNSON CITY
HARTLEY, FREDERICK C, JOHNSON CITY
* HARVEY, ROBT H, ERWIN
HAWES, CLAUDE C, JOHNSON CITY
HEINTZ, RICHARD BRUCE, JOHNSON CITY
HEMPHILL, CHRIS B, JOHNSON CITY
HILLMAN, CHAS HARLAN, JOHNSON CITY
HINES JR, ROBERT STICKLEY, JOHNSON CITY
HINTON, PHILIP J, JOHNSON CITY

HOFER, CURT, KINGSPORT
HOLSEY JR, ROYCE L, ELIZABETHTON
HUDDLESTON, SAM W, JOHNSON CITY
HUTCHINS, ROBT GORDON, JOHNSON CITY
HYDER JR, NAT EODENS, JOHNSON CITY
IBRAHIM, ATEF ABOELLATIF, ELIZABETHTON
JERNIGAN, THOMAS W, JOHNSON CITY
JOHNSON, CALVIN JOHN, JOHNSON CITY
JOHNSON, JOHN C, JOHNSON CITY
JONES, DAVID W, JOHNSON CITY
JORDAN JR, L COLLIER, JOHNSON CITY
KENNEDY, WM ENNIS, JOHNSON CITY
KIMBROUGH, BARBARA D, JOHNSON CITY
KIMBROUGH, STEPHEN M, JOHNSON CITY
KINCAID, WM KALPH, JOHNSON CITY
LAUG, DENNIS G, ELIZABETHTON
LAASON, JOHN FULLER, JOHNSON CITY
LEBOW, ROBERT A, JOHNSON CITY
* LONG, CARROLL HARDY, JOHNSON CITY
LUON, NICHOLAS R, MOUNTAIN HOME
LOPFZ, ALFONSO D, JOHNSON CITY
LURIE, DAVID P, JOHNSON CITY
MAOEN, WILLIAM L, JOHNSON CITY
MAHONEY, JAMES COOPER, JOHNSON CITY
MARTIN JR, RICARDO S, ELIZABETHTON
MATHES JR, WM T, JOHNSON CITY
MC GEE JR, THOS PAGE, JOHNSON CITY
MC GINNIS, THOS BRYAN, JOHNSON CITY
MC GOWAN JR, WINFORD K, JOHNSON CITY
MC KEE, THOS PRESTON, JOHNSON CITY
* MCGOWAN, RONALD L, JOHNSON CITY
MECKS, EDWIN A, JOHNSON CITY
MEHTA, JAYANT B, JOHNSON CITY
METTETAL, RAY WALLACE, JOHNSON CITY
MICHAL, MARY L, JOHNSON CITY
MILLER, JOHN MC CLELLAN, JOHNSON CITY
* MILLER, W RUTLEDGE, BLOWING ROCK, NC
MOFFATT, LAWRENCE STRONG, JOHNSON CITY
MONTENEGRO, FRANKLIN, JOHNSON CITY
MORGAN JR, CALVIN VERE, JOHNSON CITY
MORRISON JR, RICHARD S, JOHNSON CITY
MOSS JR, HARRY COWAN, JOHNSON CITY
MULLINS, LAWRENCE OAKKELL, ERWIN
MYERS, MARION K, JOHNSON CITY
MYERS, TEKRY L, JOHNSON CITY
NEALE III, JOHN CARLYSLE, JOHNSON CITY
NERY-MANALO, NORA, JOHNSON CITY
OLIVA, PETER A, JOHNSON CITY
OLSEN, ORLAND STENBERG, JOHNSON CITY
PARKER JR, CHAS O, JOHNSON CITY
* PEARSON, ELMER TYLER, ELIZABETHTON
PEARSON, JAMES M, JOHNSON CITY
PERRY, EDGAR EUGENE, ELIZABETHTON
PIERCE JR, EDGAR H, NASHVILLE
PLATT, JOHN P, JOHNSON CITY
POTTER JR, THOS P, JOHNSON CITY
POWELL, R PAGE, JOHNSON CITY
RANGE, JAMES JACOB, JOHNSON CITY
RANNICK, GILBERT A, JOHNSON CITY
RICHARDSON, B A, JOHNSON CITY
ROE, DAVID P, JOHNSON CITY
RUFFIN, CLARENCE LEE, JOHNSON CITY
* SAMS, JAMES MAC, JOHNSON CITY
SCHOLL, GEO KENNETH, JOHNSON CITY
SCHUELLER, WM ALAN, JOHNSON CITY
SHELTON, ALVIN DILLARD, JOHNSON CITY
SHEPARD, FRANK MICHAEL, JOHNSON CITY
SHERROD, HOWELL HODG, JOHNSON CITY
SHOLES JR, DILLARD M, JOHNSON CITY
SIOKY AFIFI, MAHMOUD, JOHNSON CITY
* SLADE, CHAS K, JOHNSON CITY
SLAGLE, DAVID J, ELIZABETHTON
SMITH, J KELLY, MOUNTAIN HOME
SMITH, MATTHEW S, JOHNSON CITY
* SMITH, MEL O, JOHNSON CITY
SPANNUTH, C L, JOHNSON CITY
STEFFNER, EDWARD BENJ, JOHNSON CITY
STEIN, MICHAEL A, JOHNSON CITY
SYKES, TED FORG, JOHNSON CITY
TAYLOR, TEODORO STEVE, ELIZABETHTON
VANOIVER JR, CLAYTON J, JOHNSON CITY
VERMILLION, STANLEY E, JOHNSON CITY
VOTAW, MAY LOUISE, JOHNSON CITY
* WAGGONER, HARRY N, JOHNSON CITY
WALTERS, PHIL VERNON, JOHNSON CITY
WEBB, CLINTON STEVE, JOHNSON CITY
WELLS, CHAS JACK, ELIZABETHTON
WELT, SELMAN I, JOHNSON CITY
WHITE, NORMAN EUGENE, JOHNSON CITY
WILEY JR, WM ARTHUR, JOHNSON CITY

WILLIAMS, G ALEX, JOHNSON CITY
WILLIAMS, HENRY JACKSON, JOHNSON CITY
WILSON JR, JOHN M, JOHNSON CITY
WILSON, G DEAN, JOHNSON CITY
WILSON, JAMES MARION, JOHNSON CITY
* WILSON, SHELBURNE O, JOHNSON CITY
* WOFFORD, CHAS PARKER, JOHNSON CITY
WOOD, JAMES FOWLE, JOHNSON CITY
WYCHE, DONALD B, JOHNSON CITY
WYCHE, MARY, JOHNSON CITY

WHITE COUNTY MEDICAL SOCIETY

ANDREWS, W H, SPARTA
BAKER, ROBERT F, SPARTA
BRADLEY, DONALD HUGHES, SPARTA
BRAMLETT, DAN J, SPARTA
COHEN, BERNARD MARTIN, SPARTA
JOHNSON, JOEL F, SPARTA
MITCHELL, CHARLES A, SPARTA
NESBETT, BILLY C, SPARTA
* ROBERTS, CHARLES B, SPARTA
SMITH JR, L H, SPARTA

WILLIAMSON COUNTY MEDICAL SOCIETY

ANDERSON, RICHARD MICHAEL, FRANKLIN
BETHURUM, ALVA JEFFERSON, FRANKLIN
BROWN, BARRY J, NASHVILLE
CASPARIS, ANTHONY DRAKE, FRANKLIN
CURTIS, SHANNON, FRANKLIN
ENCKE, WM F, FRANKLIN
EVINS, STARLING CLAUDE, FRANKLIN
FERRELL, M CRAIG, FRANKLIN
GREEK JR, FULTON M, FRANKLIN
* GUFFEE, HARRY JASPER, FRANKLIN
HALEY, FRED L, FRANKLIN
HICKS, KENNETH W, FRANKLIN
HIMMELFARB, ELLIOT HARVEY, FRANKLIN
HOLLISTER, ROBT MORRIS, FRANKLIN
HOOVER JR, HOWELL P, FRANKLIN
HUTCHESON JR, ROBT HENRY, FRANKLIN
LANE, RICHARD GEOFFREY, FRANKLIN
LEE, ANTHONY JOEL, FRANKLIN
MANSON, JAMES EDWARD, FRANKLIN
MENEELY, KAYMOND L, FRANKLIN
MILLER, PHILLIP G, FRANKLIN
MOSS JR, JOE PERSIUS, FRANKLIN
MULLINS, W MICHAEL, FRANKLIN
DMOHUNORO III, JOHN M, FRANKLIN
PATTERSON, THOS HOLOEN, FRANKLIN
RHEA, KAREN ANN HENDRIX, FRANKLIN
SAVAGE, H BRYANT, FRANKLIN
STILWELL JR, CHARLES A, FRANKLIN
SUTTON, JAMES PATRICK, NASHVILLE
WALLWORK, J CALEB, BRENTWOOD
WILLIAMS, WAYNE PATRICK, FRANKLIN
WILLOUGHBY, JOS LEEPER, FRANKLIN
WOLCOTT, EUGENE STUART, FRANKLIN
YORK, DOUGLAS CLIFTON, FRANKLIN

WILSON COUNTY MEDICAL SOCIETY

BLOEDEL, CARLA, LEBANON
BRADSHAW JR, JAMES C, LEBANON
BRYANT, JOE FRANK, LEBANON
FERGUSON, MORRIS DEAN, LEBANON
GRAY, JAMES R, LEBANON
GREGORY, KELLY G, LEBANON
GRIME, HARVEY H, LEBANON
JACKMAN, ROGER L, LEBANON
* KASH, ROSCOE CONKLING, LEBANON
* LEATHERS, JAMES PORTER, LEBANON
LOVELESS JR, JAMES ALVA, LEBANON
* LOWE, CHARLES T, LEBANON
MARTIN, GEORGE C, LEBANON
* MC FARLAND, SAM B, LEBANON
MC KINNEY, ROGER E, LEBANON
MORRIS, JAMES, LEBANON
PURYEAR, THOS RICHARD, LEBANON
QUAD, NII SABAN, LEBANON
ROBERTSON, GEO WM, LEBANON
ROGERS, CARL W, LEBANON
SPENCER, C NORMAN, LEBANON
SUMMERS, GERALD REECE, LEBANON
SWAN, JOHN L, LEBANON
TAYLOR, BILLY JAMES, LEBANON
* TILLEY, JOHN HILL, LEBANON
TURNER, ROBERT PHILLIPS, NASHVILLE
WIGGINS, BERNARD A, LEBANON
WILEY, KENNETH L, LEBANON
WILLIS, MARSHALL R, LEBANON
WOODS JR, DEXTER LEVERT, LEBANON

DECEASED PHYSICIANS—1982

ACUFF, TEA E, KNOXVILLE
ALLISON, WM EDWARD, NASHVILLE
BORG, CHAS W, MEMPHIS
BOURLAND, ROBT LEON, MEMPHIS
BRETT, ROLAND JAMES, KNOXVILLE
BRODINE, CLAYTON WILLARD, KNOXVILLE
BROWN, ROBT GAYLORD, GREENEVILLE
CHING, RICHARD E, MEMPHIS
COPELAND, BILLY HAROLD, BYROSTOWN
CRAIN, T M, SAN RAMON, CA
CRAWFORD, P THURMAN, MEMPHIS
CREECH, ROBT WELLES, STRAWBERRY PL
DAVIS, DANL, KNOXVILLE

DAVIS, MATTHEW L, LA FOLLETTE
DEERE, CHAS J, MEMPHIS
EARLY, JULIAN O, BRISTOL
EYSEN, ROBT EDWARD, IDER, AL
FAIN, SAML C, JEFFERSON CITY
GASS, ORVILLE CARLOS, CHATTANOOGA
GOLDSBERRY, JAMES E, HENDERSONVILLE
HENLEY, WALTER H, MEMPHIS
HILL, O REED, ORLANDO, FL
HOLT JR, BENTON B, SIGNAL MOUNTAIN
JAMES, JESSE ARVIN, MEMPHIS
JEFFERS, OLIVER C, MEMPHIS
JONES, CHESTER KAWEL, JACKSON

MANESS, GUY M, NASHVILLE
MATZELLE, JULIUS JOHN, NASHVILLE
MC COWN, ROBT EARL, FAYETTEVILLE
MOORE, ROBT ALEXANDER, GALLATIN
PAGE, ALFREDO HACH, MEMPHIS
PHILLIPS, W A, JOHNSON CITY
REAVIS, CHAS WM, CHATTANOOGA
ROE, JOHN MARVIN, CARTHAGE
RUTHERFORD JR, FRANK T, CARTHAGE
SEMMES, R EUSTACE, MEMPHIS
SHULL, WM GIVLER, WHITEWELL
STREETER, ALBERT NOLEN, MEMPHIS
SWINGLE JR, HUGH F, JOHNSON CITY

INDEX TO VOLUME 75

PAGES BY ISSUE

January 1-74
February 75-158
March 159-232
April 233-302

May 303-368
June 369-446
July 447-510
August 511-576

September 577-640
October 641-714
November 715-782
December 783-862

INDEX OF AUTHORS

Anders, Geoffrey T.....743
Anderson, H. R.....810
Andrews, Douglas535
Aycock, Richard S.269
Baddour, Larry M.....668
Barrick, Howard.....207
Beck, Leif.....743
Benator, Richard485
Bentley, Sterling E.756
Berk, Steven L.....594
Braun, R. Daniel182
Burkhart, John H.537
Burrus, Swan, Jr.823
Campbell, W. Barton. 51, 130, 205,
276, 340, 483, 550, 608,
684, 754, 812
Cheek, Richard.....132
Chung, Sung J.535
Cooper, Carl, Jr.....471
Coto, Humberto594
Crofford, Oscar B.678
Dao, Anh H.....184
Dewey, Mary Jane280
Dismuke, S. Edwards.....601
Dittes, Albert G.635
Dodd, Halbert B., II562
Donaldson, Robert C.729
Dopp, Alan C.100
Dotson, Robert S., Jr.....618
Dugdale, Marion.....269
Dunn, Diane686
Dunn, Winfield457
Edmonson, Allen S.....57, 141,
215, 285
Eaddy, John A.....22
Ekenna, Okechukwu594
Entman, Stephen S.....318
Farringer, J. L., Jr.795
Feman, Stephen S.....180
Fish, Charles A.618
Fleming, James H.218
Gage, Kathleen.....594

Gammill, Stephen L. 132, 339, 548,
753
Gannon, Michael J.743
Graber, Alan L. 46, 128, 480
Graber, Glenn C.22
Greco, F. Anthony.....475
Gregory, Marvin G.....122
Griscom, John H.....469
Gros, J. C.....13
Haley, Fred L.....187
Harris, Jeffrey S.....280
Harris, T. Reginald462
Harwell, William B.....20
Holcomb, George W., Jr.175, 351,
417, 493, 559, 613, 695, 765, 819
Hudgins, L. B.733
Ikard, Robert W.530
Jabbour, C. Eugene339
Johnson, David H.475
Kampmeier, R. H.93
King, I. Ray.....91
Koomen, John.....313
Kossmann, Charles E. 39, 269, 543,
601, 748
Lankford, William132
Lefkowitz, Lewis B., Jr.124
Lewis, Malcolm.....11
Lewis, Myron.....132
Limbacher, J. P., II733
Lipshitz, Jeffrey.....103
Madhavan, Sethu V. 325, 533
Majure, Gregg.....50
Mann, Jon39
Martin, J. Thomas743
Mathes, Gordon753
McGhee, Timothy..... 48, 278
Moore, Steven.....808
Nag, Subir K.321
Neely, Charles L., Jr.321
Newman, Larry.....548
Nunn, Stewart L.543
Orman, Stephen V.....543

Paine, Thomas F., Jr.225
Painter, C. John182
Painter, Max339
Penn, Marsha K.....180
Pesola, David.....748
Pickens, David R., Jr.795
Plitman, Gerald I802
Powell, Jack P.133
Powers, Thomas A.798
Pritchard, Alan321
Qureshi, M. H. A.....17
Rabin, Pauline L.....313
Rainer, J. Kenyon253
Ramanathan, Kodangudi B.....39
Robertson, James T.253
Russo, William132
Sabesin, Seymour M.....748
Sadler, Robert N.....768
Satterfield, William T.....525
Scott, Randall L.....48, 278, 485, 808
Semmer, John R.617
Shields, Gregory W.....678
Sholes, Dillard M., Jr.....729
Shomo, John342
Skokos, C. Kemp103
Solammadevi, S. V. (See Madhavan)
Tai, Douglas L.....321
Terry, Richard B.....795
Thomison, John B.....58, 59, 142, 143,
144, 216, 217, 247, 288, 289, 352,
353, 418, 419, 494, 495, 560, 562,
614, 615, 616, 655, 696, 697, 698,
766, 767, 820, 821, 822
Thompson, William C.....678
Tonkin, Allen 132, 339
Tyler, Jane L.798
Vider, Manuel.....321
Warner, John S.662
Weathers, Nola59
Wentz, Anne Colston.....587
Wong, Song W.....184
Zondlo, Frank C.698

INDEX OF SUBJECTS

Abbreviations: “cr” for case report; “ed” for editorial; “(*)” for original article; “pp” for president’s page; “si” for special item; “AM-81” for report from AMA 1981 annual meeting; “AM-82” for report from AMA 1982 annual meeting; and “IM-81” for report from AMA 1981 interim meeting.

Acupuncture (AM-81)	202
Alcoholism	(See Hepatitis, Alcoholic)
American Medical Association	
decisions, decisions, decisions (pp)	613
final order of the FTC (AM-82).....	775
into and out of the quagmire—we hope (ed)	560
report from the 1982 AMA annual meeting (commentary)	655
statement on voluntary health planning (AM-81).....	26
the 1981 AMA interim meeting (commentary).....	247
the really great one! (ed).....	696
Announcements	62, 147, 222, 293, 358, 424, 500, 568, 623, 702, 772, 827
Apnea, Postoperative (cr)	535
Bureaucracy	(See Federal Trade Commission)
Cancer	(See also Oncology Grand Rounds)
adenocarcinoma of the colon, steatorrhea as the presenting manifestation of (cr)	533
adenocarcinoma of the stomach associated with pregnancy (cr)	103
brachytherapy in the management of recurrent carcinoma of the head and neck (*)	321
CEA as a cancer marker (si)	24
cervical cancer in two southern Appalachian counties (*)	729
solitary (localized) pleural mesothelioma (cr)	184
Cardiovascular Disease	
(See also EKG, Med Grand Rounds)	
coronary artery bypass surgery (si)	335
Case Reports	
adenocarcinoma of the colon, steatorrhea as the presenting manifestation of	533
adenocarcinoma of the stomach associated with pregnancy	103
Alport’s syndrome, fibromuscular dysplasia in	733
apnea, prolonged postoperative succinylcholine-induced	535
elevated CSF protein in uremia and dehydration	325
group G streptococcal septic arthritis	594
hepatic uptake of a bone scanning agent in alcoholic hepatitis	798
jejunoileal bypass, recurrent inflammatory skin lesions complicating	17
mesothelioma, solitary (localized) pleural	184
North American blastomycosis, unusual case of	20
subdural empyema, CAT scan in diagnosis of	668
CAT Scan , in diagnosing subdural empyema (cr).....	668
CAT Scan of the Month	
carcinoma of the pancreas.....	132
gluteal lipoma	339
intrapertitoneal undescended testicle	548
retroperitoneal fibrosis.....	753
Chinese Medicine	
medicine and government—a China experience (*).....	175
Clinical Note	
calcium channel blockers—verapamil and nifedipine	187
Continuing Medical Education	
essentials for sponsors of (IM-81)	257
into and out of the quagmire—we hope (ed)	560
Continuing Medical Education Opportunities	63, 151, 223, 295, 359, 429, 501, 569, 626, 703, 777, 829
Costs, Health Care	(See also Health Care, Nat’l News)
definition of competition (IM-81)	503
health care costs, or, the sheep-clad wolf (ed)	821
medical costs—the good news and the bad (pp).....	559
new directions in health care financing (*)	462
political hardball at the aging conference (si)	124
pro-competition legislation: friend or foe? (*).....	457
the old folks at home: reflections (ed)	144
Dermatology	
recurrent inflammatory skin lesions complicating jejunoileal bypass (cr)	17
Diabetes	
hyperkalemia in diabetes mellitus	128
hypoglycemia, management of	480
ketoacidosis during treatment with insulin pump	46
Doppler Scan	
noninvasive assessment of carotid circulation (*)	662
Drugs	
abuse, related to prescribing practices (AM-81)	199
calcium channel blockers—verapamil and nifedipine.....	187
pharmacists request one prescription per blank (mail box)	59
Editorials	
burnout	288
changing times: debauchery, disaster, and dismay	353
eating crow	615
elegy for a mind	59
fancies and fantasies: the House, vintage 1982	418
gift	822
health care costs, or, the sheep-clad wolf.....	821
inroads	494
into and out of the quagmire—we hope.....	560
it’s an ill wind—	216
keep fingers flaccid for placid passage	419
less for more	352
new year’s greetings	58
on being our neighbor’s neighbor	143
on disposing of the fruits of our labor	615
on equal protection.....	616
on taking a stand: George Washington remembered....	217
on the ascent of man	766
on the intimation of mortality	562
or something ’ll getcha, anyhow.....	697
“primum non nocere” means safety first	614
safety last	698
shalom.....	820

shifting sands	495
southern exposure	767
the goblins 'll getcha.	697
the old folks at home: reflections.	144
the really great one!	696
thoughts for the fourth.	495
through a glass brightly	289
win, lose, or draw.	142
words from on high—a morality play	353
Education, Medical	
examinations for medical licensure (AM-81)	109
GMENAC final report (IM-81)	707
the two faces of opportunity (si)	537
views of an LMD (si)	802
EKG of the Month	
a problem in pacing	754
atrial rhythm	608
AV sequential pacemaker	205
cardiac enlargement	812
chronic pericarditis	130
heart block	276
mitral stenosis	684
quinidine arrhythmia	340
tachycardia	51, 483
unipolar pacemaker inhibition	550
Environment, analysis (AM-81)	113
Ethics, Medical	
“zebras” vs. “horses” (si)	22
Federal Trade Commission	
final order of the FTC (AM-82)	775
the FTC challenge (pp)	695
the outreach of government (pp)	765
Gastrointestinal Disease	
adenocarcinoma of the stomach associated with	
pregnancy (cr)	103
endoscopic retrograde cholangiopancreatography (*)	100
jejunoileal bypass, recurrent inflammatory skin	
lesions complicating (cr)	17
Geriatrics	
political hardball at the aging conference (si)	124
the old folks at home: reflections (ed)	144
Gynecology (See Obstetrics)	
Health Care (See also AMA, Costs, Med Briefs, Nat'l News)	
as others see us (pp)	493
coalitions for health care (IM-81)	410
community effort (pp)	141
health manpower (IM-81)	329
medicine and government—a China experience (*)	175
the hospital—mistake or mystique? (si)	469
Health Planning, Voluntary	
AMA statement on (AM-81)	26
initiation of, locally based (AM-81)	29
Hemiplegia, an 11-year summary (*)	525
Hepatitis, Alcoholic	
alcoholic hepatitis	748
hepatic uptake of a bone scanning agent in (cr)	798
History	
medicine in the middle ages: a brief summary (si)	635
rheumatologists note: letter from Dr. James Roane	
to David Campbell (si)	225
the Asklepiion Club of Nashville (*)	93
the Nashville Academy of Medicine “Yankee	
Gunboat” gavel (*)	530
Holcomb, George W., Jr.—the new president (si)	286

IMPACT	(See Political Action)
Impaired Physician	
an open letter to all physicians with physical	
disability (mail box)	698
physician responsibility (pp)	57
Infectious Diseases	
group G streptococcal septic arthritis (cr)	594
North American blastomycosis, unusual case (cr)	20
Infertility	
in vitro fertilization program at Vanderbilt	
Medical Center (*)	587
In Memoriam	60, 144, 218, 290, 354, 420, 496, 563, 618, 699, 768, 823
Insurance, group plans for TMA members	435
Kidney Disease (See Nephrology)	
Mail Box	59, 218, 562, 617, 698, 768, 823
Maternal Mortality, report of the subcommittee of	
the TMA maternal and child care committee (si)	736
Mediastinal Drainage, a different technique (*)	795
Medical Briefs	69, 228, 363,
Medical Grand Rounds	
alcoholic hepatitis	748
hyperlipidemia in coronary artery disease	543
insulin resistance, two forms of	678
myocardial infarction of nonatheromatous origin	39
preventive cardiology: the physician's role in	
risk factor reduction	601
primary fibrinolysis	269
Medical News in Tennessee	292, 619, 769,
Medical Staff Responsibility (pp)	57
Mental Health	
elegy for a mind (ed)	59
on equal protection (ed)	616
NIH Consensus Development Conference Summaries	
CEA as a cancer marker	24
coronary artery bypass surgery	335
National News	146, 220, 292, 355, 422, 497, 564, 620, 700, 769, 824
New Members	60, 145, 219, 290, 354, 420, 496, 563, 618, 699, 768, 823
Nephrology	
fibromuscular dysplasia in Alport's syndrome (cr)	733
Neurology	
noninvasive assessment of carotid circulation (*)	662
Nuclear Medicine	
hepatic uptake of a bone scanning agent in	
alcoholic hepatitis (cr)	
Obstetrics	
adenocarcinoma of the stomach associated with	
pregnancy (cr)	103
blighted pregnancy at age 54 (mail box)	823
ectopic pregnancy revisited (*)	91
electronic fetal monitoring (AM-81)	260
in defense of Cesarean section (si)	122
in vitro fertilization program at Vanderbilt	
Medical Center (*)	587
obstetrical considerations for the	
working woman (*)	318
report of the maternal mortality subcommittee of the	
TMA maternal and child care committee (si)	736
umbilical vessel trauma: a potentially fatal	
complication of amniocentesis (*)	182
Oncology Grand Rounds	
bone metastases: diagnosis and management.	475

Ophthalmology	
blindness in Tennessee in 1980-1981 (*)	180
Organ Donor Recruitment (AM-81)	197
Peer Review , principles for voluntary medical (IM-81)	705
Personal News	60, 145, 220, 291, 355, 421, 497, 563, 619, 699, 769, 824
Physician's Recognition Award Recipients	60, 145, 219, 291, 355, 422, 497, 564, 619, 700, 769, 824
Placement Service	71, 155, 229, 299, 365, 443, 507, 573, 637, 709, 779, 859
Plastic Surgery	
exploding implants (mail box)	218
Political Action	
get elected? (pp)	215
inroads (ed)	494
inroads (vb)	471
President's Page	
a new beginning	351
as others see us	493
community effort	141
decisions, decisions, decisions	613
get elected?	215
medical costs—the good news and the bad	559
once again December	819
physician responsibility	57
pleasure	285
the FTC challenge	695
the outreach of government	765
why the TMA annual meeting?	417
Psychiatry	
the violent patient—differential diagnosis and management (*)	313
Public Health Report	
boards and advisory committees of TDPH	686
childhood immunization programs	549
health promotion program	610
laboratory training services	207
physician recruitment program	487
refugees in Tennessee	756
renal disease program	50
stress management program	280
training for EMT/paramedics in perinatal care and transport	133
tuberculosis in Tennessee, update	810
venereal disease control, a new challenge	342
Radiation Safety	
“primum non nocere” means safety first (ed)	614
ultrasound (mail box)	617
Radiation Therapy	
role of brachytherapy in the management of recurrent carcinoma of the head and neck (*)	321
Radiology Case of the Month	
abdominal aneurysm	485
bilateral renal artery stenosis	48
hypertrophic pulmonary osteoarthropathy	278
pneumatosis cystoides intestinalis	808
Retirement Plans	(See Tax Law)
Special Items	22, 122, 124, 225, 286, 469 537, 635, 736, 743, 802
Surgery, Neurological	
transsphenoidal microsurgery of pituitary tumors (*)	253
Tax Law , affects physicians significantly (si)	743
Television Violence	
shifting sands (ed)	495
Tennessee Medical Association	
a new beginning (pp)	351
annual meeting timetable	89
community service awards, 1982	395
county medical society officers, 1982-1983	436
distinguished service awards, 1982	396
fancies and fantasies: the House, vintage 1982 (ed)	418
highlights of the board of trustees meeting— January 9-10, 1982	226
highlights of the board of trustees meetings— April 14 and April 17, 1982	431
highlights of the board of trustees meeting— July 11, 1982	633
highlights of the board of trustees meeting— October 3, 1982	832
house of delegates, composition (annual meeting)	405
house of delegates, index to proceedings (annual meeting)	381
house of delegates, proceedings (annual meeting)	383
insurance plans, group	435
officers and committees, 1982-1983	437
outstanding physician of the year, 1982	395
pleasure (pp)	285
the new president—George W. Holcomb, Jr., M.D. (si)	286
why the TMA annual meeting? (pp)	417
Tonsillectomy	
a whole life is watching at the tonsillectomy (*)	13
Uremia	
elevated CSF protein in uremia and dehydration (cr)	325
Vascular Disease	
varicose veins, management of by surgery and by injection (*)	11
Viewing Box	
inroads	471
Warfare, Thermonuclear	
physician and public education on the medical consequences of thermonuclear warfare (IM-81)	411

BE THE DOCTOR YOU WANT TO BE. IN THE NAVY.

The Navy is seeking physicians who want an alternative to the administrative burden and expense of private practice. Our modern medical facilities provide the latest techniques and equipment. Opportunities exist to do research on projects both exciting and clinically meaningful, including aerospace and submarine medicine, underwater physiology and environmental and preventive medicine. Professional allowances in addition to competitive salaries. Non-taxable quarters and subsistence allowances. Thirty days' paid vacation earned each year. Insurance, medical, dental package.

For more information, contact:

Mike Maher
Medical Program Recruiter
Navy Recruiting District Nashville
1808 West End Ave. • Nashville, TN 37203
In Nashville (615) 251-5571
In Tennessee (800) 342-8629

PHYSICIANS CLINIC FOR LEASE OR SALE

3000+ Sq. Ft.
4550 Summer Ave.
Memphis, Tennessee

Contact:
H. T. MARTIN
3443 Dell Glade
Memphis, Tennessee 38111
(901) 458-4769

PHYSICIANS . . .

You're invited to join the medical staff of the Memphis and Shelby County Health Department, a progressive and nationally recognized department for its primary care program. Positions available in the areas of adult primary care, pediatrics and epidemiology. Competitive salary and excellent benefits.

Contact: Charles Konigsberg, Jr., M.D., Director and Health Officer, Memphis and Shelby County Health Department, 814 Jefferson Ave., Memphis, TN 38105. Phone (901) 528-3763.

PHYSICIAN NEEDED Jefferson City, Missouri

CHIEF MEDICAL OFFICER for Department of Corrections in Missouri. Administrative work combined with medical duties. Stable employment in a middle class city. Immediate opening.

Contact Melvin Gardner, Personnel Officer, P.O. Box 236, Jefferson City, Missouri 65102.

SUPPORT YOUR ADVERTISERS

Many of the advertisers in this Journal are long-standing patrons of our monthly publication. Their products and services are of the highest quality available. Don't take them for granted. Read their ads!

NOT TO CIRCULATE

NOT TO CIRCULATE

